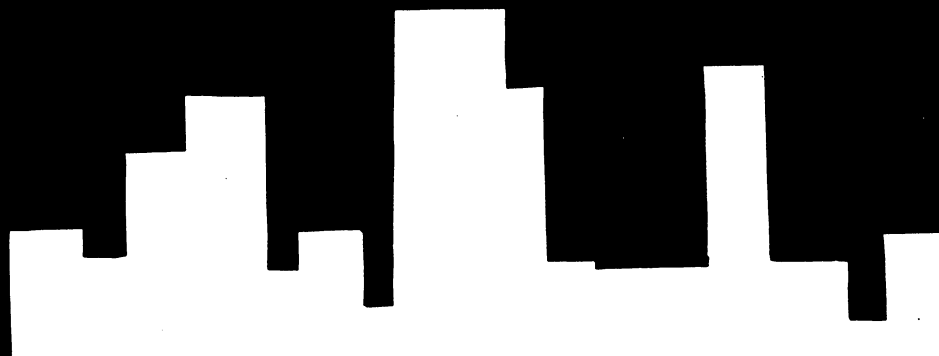


skyLine

Bulletin Board System

Version 1.3





The SKYLINE Bulletin Board System

Version 1.2

by Michael Cox

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Published by

CVI TELEPRODUCTIONS

P.O. Box 13417

El Paso, Texas 79913-3417

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Table of Contents

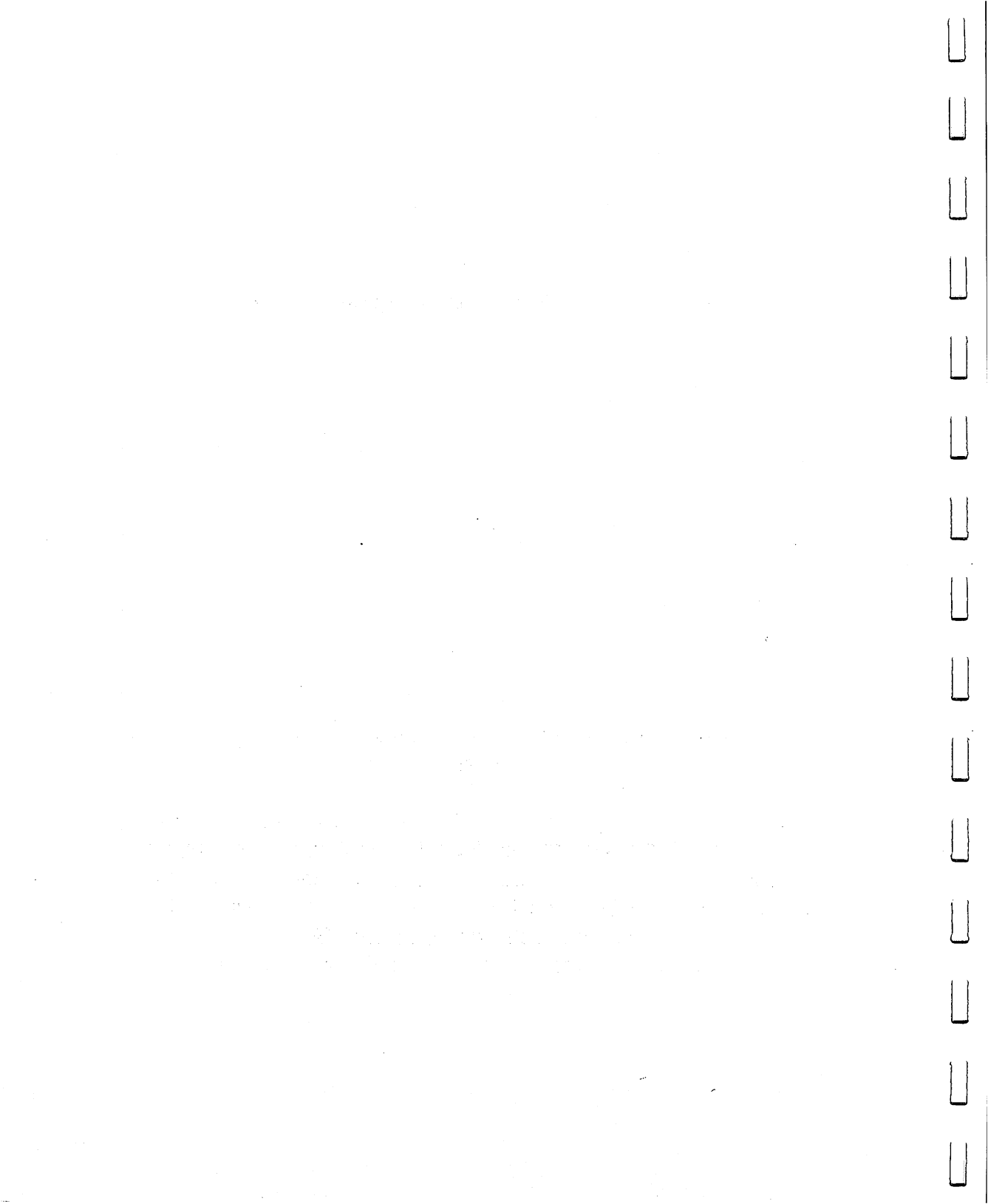
1. Introduction	6
2. Preliminaries	7
Hardware requirements	7
Back up your disk!	7
Registration and Support	8
New features in 1.2	8
A first look	11
3. Installation	12
Starting from scratch	12
Assignments and directories needed	12
Coldstarting - step by step	14
Things you should know	17
Converting from Atredes 1.0	17
Upgrading from Atredes 1.1	19
Converting from other BBS systems	19
Configuring your system	19
Modems	20
Nonstandard serial ports	23
Configuration options	24
Setting up message base SIGs	26
Setting up databases	29
Setting up text libraries	30
Finished?	30
5. Menu trees	31
Circular references	32
BBSs, space-time, and Penrose diagrams	32
Possibilities	33
Skypix gadgets	35
An example menu tree	35
Constructing menus	36

The menu compiler	37
Defining ranges	39
The BBS command set	41
6. Online features	45
Environment Files	45
Help files	47
Embedded Commands	47
Menu control commands	52
Examples	54
The command parser	56
Stacking commands	56
The message editor	56
Message display format	57
Screen clearing	58
7. Offline features	59
The utility windows	59
INTERACT	59
DATABASE UPKEEP	62
Automatic upkeep	63
The batch files	63
The Intuition menu items	63
8. Skypix	69
9. The AREXX interface	77
The USER Structure	81
Index	

For David and Mary

The author wishes to acknowledge the help and support of the following people:

Crack beta-testing team: Guy Patten, Bob Hassel, Nick Poliwko, John Kendrix, Doug Gallarda, Mike Chubiz, Adrian Amberg, Donald Landes, J. L. White, Scott Lee, and honorary beta tester Jay "Padre" Miner; Chet Solace, Perry Kivolowitz, Jack Radigan, Bob Voight, Watson Rogers, and Don Gilbreath and Alan Brooks at Commodore.



Introduction

Thanks for purchasing SKYLINE! You have chosen the most unique BBS system in the world. While you can get up and running very quickly, it may take you a long time to get around to using all the options available.

The system is so flexible that it is very unlikely you'll ever run out of power. Even if you find things it can't do, the AREXX interfacing capabilities allow you to literally take control in your own hands and add anything you can think of. Dozens of public-domain SKYLINE AREXX programs exist already to add power, versatility and fun to your system. Add to this the freedom of the compiled menu structure, the versatility of the many embedded commands and the excitement of Skypix graphics and you have a system that is like no other.

All this power doesn't mean that Skyline is hard to use, though. On the contrary, the primary design goal - even above power - was that the system would be as easy to use and intuitive as possible. You should have a basic understanding of the system in a very short time. We recommend that you start out with the basic, "turnkey" system on your disk, and expand outward as you understand more of the system. If you do it this way, you can be up and running in an hour or less.

Even with all efforts at simplicity, SKYLINE is a professional-level product and does require a basic knowledge of the CLI commands and use of a text editor. You can easily pick up these skills with the aid of an AmigaDOS reference manual.



Preliminaries

REQUIREMENTS

Skyline 1.2 requires, at a minimum, the following hardware configuration:

- 1. Any model of Amiga computer with at least one megabyte of RAM. If the system is to be multitasked, more memory is strongly recommended.*
- 2. A Hayes-compatible or HST modem.*
- 3. Any form of mass storage. Skyline will run on anything from a single floppy to optical disks. We highly recommend a minimum of a 20-megabyte hard drive.*
- 4. A hardware clock. You CAN run without one if you are careful to set the date and time before you run Skyline every time.*
- 5. The AREXX language, while not an absolute requirement, is strongly recommended. This excellent macro language multiplies the power of Skyline many times. If you want to run online games, for instance, AREXX is a must. It is available from your local dealer. Install it as recommended in its documentation.*

BACK UP YOUR DISK!

Please make multiple copies of your SKYLINE disk; it isn't copy protected. However, it IS serial numbered. Be very careful that your copy of Skyline doesn't fall into the hands of pirates. **Using this software for illegal purposes is prohibited**, and doing so will cancel all support privileges.

Preliminaries

REGISTRATION AND SUPPORT

It is very important that you return the enclosed registration sheet, with all the information requested. This is the only way we have of knowing that you are a legitimate user and entitled to support privileges.

SKYLINE's distribution is unusual in that it is not sold through a standard publisher. The company CVI consists of exactly one person: the author of the software. This being the case, individual voicemail support is impossible. All support of the software is handled online through the home system, ICONOCLAST. Here's how it works:

When we receive your registration, you will be entered into the userlog as a Skyline SYSOP. Your password is your serial number. You will have access to an area online called the SKYLINE SYSOP FORUM. This is a "meeting room" for all Skyline SYSOPS around the world. If after carefully following instructions you can't get something to work as described, ask a question about it in this area. Be very specific and exact in your description of the problem; we can't help if we can't isolate the circumstances. Chances are very good that someone online knows exactly what the problem is. If no one knows the answer to your question, the author will jump in and give a definite answer. This ensures that your questions will be answered, while still leaving the author free to work on the software.

(Before you call, keep in mind that almost all reported "bugs" turn out to be user error. Double-check the instructions!)

Minor "bug fixes", if any, will be available online for direct downloading. Major enhancements, when available, will be offered for a reasonable upgrade fee.

This is the full extent of the support offered for SKYLINE. Signing your registration sheet signifies that you agree to these terms.

NEW FEATURES OF SKYLINE 1.2:

Many people who buy this software will already be familiar with some version of Skyline's predecessor, ATREDES. Among many other things, here are some things that have changed between Atredes 1.0 and Skyline 1.2:

8

ZMODEM support.

YModem and ZModem in TERMINAL mode.

Registration / Support

New Features

Preliminaries

Compiled menus: This allows you to create your own menu trees with your choice of commands, command codes, sub-menus, area ranges, access level locks, and much more. Combined with powerful new embedded commands, these can be used to customize your board to an almost unlimited extent. A system rivaling the complexity of the major host systems is easy to assemble. Up to 255 separate "main menus" are possible, with a tree hanging from each; the Main Menu number can be assigned to users and to members and nonmembers. The Menu Compiler will actually generate attractive menus for you in all three graphic styles, or will let you design your own. The compiled menu system makes it easy to customize your system to do practically anything you can think of. The new embedded commands also give a great deal of power and versatility; for instance, it is possible to execute any command on the board automatically from a text file, and to ask multiple-choice questions. You could use these features to, for instance, show a listing of all the new files when a user logs on, or to automatically send a new caller to the registration sequence. Things like asking if the user has a comment for the SYSOP upon logoff, or asking "Are you sure?" before logoff, are easy to implement. The line between text files and menus is so hazy that you can even do things like hang an individualized menu tree off a caller's "Urgent" text file, or off the Member and Nonmember text files.

True sub-boards: A menu can define a "range" of message and database areas, outside of which all other areas are completely invisible. This allows absolute compartmentalization of the system, especially when combined with the other capabilities of the menus.

Global new-message searches: One command will move through ALL a user's areas looking for new mail. Also, at logon, a caller is told by NAME what areas he has messages waiting in.

SkyPix gadgets: The menus generated from the compiler have "gadgets" in them that can be used from a SkyPix-compatible terminal. These work exactly like Intuition gadgets; to activate them, single-click them with the mouse.

AREXX support: The most exciting change of all. A large number of "hooks" exist in the system to let you manipulate Skyline any way you choose from an Arexx script. This allows anything from online games to callback systems to roll-your-own networks.

SysOp comments, directed to any area you choose.

"Iconify" and "Quiet" Modes - Iconify removes the entire Skyline display and leaves only a tiny gadget [BBS] in the Workbench title bar. The board is still completely active. To get the display back, just click on the gadget. Quiet mode moves the

New features

Preliminaries

Skyline display to the back and KEEPS it there, regardless of SkyPix display changes, etc. It also silences the Chat sample.

All the upkeep programs now work as child processes under SKYLINE. Three programs, "Interact", "Configuration", and "DBUpkeep", can be called from the Intuition menus. When called, the screen goes to interlace mode to allow the full BBS monitor to remain active and these programs open a window in the lower half of the Skyline display. Interact is for userlog upkeep and also works as a truly interactive window into a caller's parameters. For instance, raising his access or turning on Skypix for him while he's online is as easy as selecting a gadget. Configure is expanded and streamlined, with provisions for automatically creating new areas if you run out, etc. DBUpkeep is for database upkeep and has one major new feature, the ability to adopt orphan files. Adding a lot of new files to your database is as easy as physically moving them there, selecting Adopt Orphans, and entering a description for each file. The files and all their parameters are selected automatically. This feature will make things easier for people who are just switching over to Skyline from some other system.

Stacked commands - You can enter a command stack at any menu that will take you through the system, executing the commands in order.

Drop to DOS - By setting a flag in a user's profile, it is possible to use many of the standard CLI commands remotely.

SIGOP flag - A user flag, instead of the old system of access levels 250-254, is used to define a user as a SIGOP.

SKYLINE: A First Look

If you're anything like us, you hate to read documentation. Nevertheless it is **VERY IMPORTANT** that you read and understand every page of this manual. Even if you are thoroughly familiar with Skyline's predecessor, ATREDES, so many things have been added that you really must read this manual from cover to cover.

The 1.0 release of Atredes, long ago, had specific goals in mind: to provide an easy-to-use, quick setup BBS system that was powerful enough to satisfy users while being as simple to operate as possible. To achieve this goal a design decision was made to provide a single menu control path with a definite and unchanging command structure. This allowed, among other things, the English command parser to be very powerful, since it always knew exactly where to go to execute a certain command. Skyline, though, operates on the principle of "Compiled Menus", which is a very powerful way of designing your own system. Combined with this approach are a great many new controls and options to take advantage of the new system.

New features

Preliminaries

We haven't forgotten those who liked Atredes 1.0 for its simplicity, however. The Menu Compiler included in this update is a very powerful Intuition-driven utility that can design a menu tree for you immediately with very little work. There is no need to get into the fancy stuff until you need it. However, you need to understand what the system is capable of before you can use even the menu compiler to its full advantage.

Installation

Starting From Scratch

Follow the instructions in this section if you have never run an Atredes system. This includes users who are switching their systems over from other BBS programs. If you are already familiar with Atredes, you may wish to skip to the section "Converting from Atredes 1.0".

Setting up Skyline requires that the SysOp create certain directories and make certain assignments in the Startup-Sequence. Basing the system on logical assignments allows the system files to be placed wherever is convenient; Skyline will look for the required files and directories wherever they have been ASSIGNED. There are virtually no limitations on just where these areas are assigned - nothing prevents the SysOp from splitting the functions between mass storage devices at will, or even from running the whole system from the RAM disk (though this is not recommended for reasons of data protection).

ASSIGNMENTS AND DIRECTORIES NEEDED

The following is a list of the logical-device assignments that must be made, the directories that are associated with each, and the directories that must be created within each. Study these carefully before you start the setup process. A step by step setup follows this section.

BBS: - BBS: is typically assigned to a directory called 'Skyline'. All the operation files essential to the system are stored here, as well as all the executable programs in the system. No subdirectories are required (though some SysOps like to place their other assigned directories within this one). Copy everything in the "BBS" directory on your Skyline disk into this area. *WARNING: Do NOT place the BBS: assignment "within" any of the other assignments.* This could lead to a breach of security. The converse (mentioned above) is completely safe.

On your storage device "Makedir Skyline"

Starting from scratch

Assignments & directories

Installation

Within your Startup-sequence "Assign BBS: (Storage Device):Skyline"

MSG: - MSG: is typically assigned to a directory called 'Mail'. This is where all the message bases will be kept. Within MSG: will be numbered directories for each message base. The system will create these during the "Cold Start" operations described below.

On your storage device "Makedir Mail"

Within your Startup-sequence "Assign MSG: (Storage Device):Mail"

TXT: - Typically, TXT: is assigned to a directory called 'Text'. Skyline uses a number of text files for various purposes. All of them, without exception, are stored here. Create the following directories within TXT: "Help" (TXT:Help), "Envir" (TXT:Envir), and numbered directories for each text library that you intend to open (you can do the numbered directories later, when you understand the text library better).

On your storage device "Makedir Text"

Within the Text directory "Makedir Help"

Within the Text directory "Makedir Envir"

Within the Text directory "Makedir 1", "Makedir 2",... "Makedir [n]"

Within your Startup-sequence "Assign TXT: (Storage Device):Text"

TMP: - This is a temporary storage area used by the system; it is used primarily for ZMODEM operations such as BBS uploads and terminal-mode downloads. The capture buffer file "BUFFER" also appears here. If you have enough RAM (about 1.5 meg or more), assign this within the RAM disk (it will be useful to create a directory such as "RAM:TMP" for this purpose).

If you have under 1.5 megabytes of Ram, Make a directory on your storage device called "Temporary".

Within your startup-sequence "Assign TMP: Ram:" (if you have 1.5 megabytes or more)

Within your Startup-sequence "Assign TMP: (Storage Device):Temporary" (if you have less than 1.5 megabytes).

DB1:, DB2:, etc. - You need to assign one of these for each and every database area. Assigning databases in this way allows the system to have an indefinitely large database, as you can assign each area to a different mass storage device if you wish. While it is recommended that each database be assigned to an individual directory

Assignments and directories
The TMP: assignment

Installation

**MAKEDIR DH0:TEXT
MAKEDIR DH0:TEXT/ENVIR
MAKEDIR DH0:TEXT/HELP
MAKEDIR DH0:TEXT/1
MAKEDIR DH0:TEXT/2
MAKEDIR DH0:TEXT/n**

You can have as many text areas as you wish; just continue making directories within the TEXT area until you reach your desired number of bases.

**MAKEDIR DH0:TEMPORARY (if you do not wish to assign TMP: to RAM:)
MAKEDIR DH0:SKYDOORS**

Skyline gives you the option to have as many Databases as you wish. There are two methods that you can choose from when making your database directories.

a) The first method is to create an area for all databases. This means that every file that appears in your databases will be contained in one directory:

MAKEDIR DH0:DATABASES

b) The second method is to create directories for specific databases or for groups of databases:

**MAKEDIR DH0:DATABASEx
MAKEDIR DH0:DATABASEx
MAKEDIR DH0:DATABASEx**

2. Edit your "Startup-Sequence" with any text editor to make the logical assignments that Skyline needs. The Assignments you need to make are as follows:

Using method A:

**Assign BBS: DH0:Skyline
Assign MSG: DH0:Mail
Assign JMP: DH0:SkyDoors
Assign TXT: DH0:Text
Assign TMP: DH0:Temporary
Assign DB1: DH0:DataBase1
Assign DB2: DH0:DataBase2
Assign DB3: DH0:DataBase3
Assign DB4: DH0:DataBase4
Assign DB5: DH0:DataBase5**

Installation

Assign DB6: DH0:DataBase6
Assign DB7: DH0:DataBase7
Assign DB8: DH0:DataBase8
Assign DB9: DH0:DataBase9
Assign DB10: DH0:DataBase10

Using method B:

Assign BBS: DH0:Skyline
Assign MSG: DH0:Mail
Assign JMP: DH0:SkyDoors
Assign TXT: DH0:Text
Assign TMP: DH0:Temporary
Assign DB1: DH0:DataBases
Assign DB2: DH0:DataBases
Assign DB3: DH0:DataBases
Assign DB4: DH0:DataBases
Assign DB5: DH0:DataBases
Assign DB6: DH0:DataBases
Assign DB7: DH0:DataBases
Assign DB8: DH0:DataBases
Assign DB9: DH0:DataBases
Assign DB10: DH0:DataBases

If you are still unclear on how to go about making these assignments, study the Startup-Sequence on your Skyline disk and the directory structure of the disk. This should make everything much clearer.

3. Reboot your system, then insert the "Skyline1.2" disk 1 into any drive.
4. Execute the following commands from an active CLI prompt:

Copy SKYLINE1.2:BBS all to BBS:

Copy SKYLINE1.2:TXT all to TXT:

Copy SKYLINE1.2:MSG all to MSG:

CD BBS:

16

If you do this, your system is ready to put on-line immediately, using the ready-to-run configuration contained on the disk. This is the recommended method; you can always alter things later when you want to get fancy. You will be entered in the

**Startup-sequence
assignments**

Installation

userlog as SYSOP, with the password SYSOP (of course, you MUST use "Interact" to change this password before putting the system on-line; see the section on INTERACT for details).

Things you should know

Skyline is not very picky about how you have your system set up, but there are two things that are very important to keep her happy.

Master Program: Always run Skyline with the command RUN MASTER, entered at a CLI prompt or through a script or Startup-Sequence. Do NOT attempt to run Skyline with an icon, unless you do so with a script in conjunction with the AmigaDOS commands "IconX" or "XIcon". Skyline requires a "parent" CLI window or else you will probably experience a mysterious crash at some time. You may, of course, use this parent CLI for other things after running Skyline. Utilities like "RunBack" or "RunBackground" may cause problems; if they do, don't use them with Skyline.

Stack: Skyline likes a stack size of at least 20K, since the compiled menus operate using recursive code. Don't make the mistake of setting the stack size in a DIFFERENT CLI than the one Skyline is running in. You can check this by running the AmigaDOS command "STATUS full" from a CLI prompt while Skyline is running. This will show the stack size for each active process, including Skyline.

CONVERTING FROM ATREDES 1.0

This section is for SysOps who are currently running Atredes 1.0 and are upgrading to SKYLINE 1.2.

The most important thing to remember is that Skyline 1.2 is RADICALLY different from Atredes 1.0. Following the procedure below is not enough; you must read and understand this manual from cover to cover. Very little is the same, although we've tried to ease the conversion process as much as possible.

To convert from Atredes 1.0, perform the following steps:

1. Delete BBS:Atredes and copy these files from the Skyline disk into your assigned "BBS:" directory:

**SKYLINE
COMPILER
CONFIGURE
CONVERT**

**Things you should know
Converting from Atredes 1.0**

Installation

**DBUPKEEP
INTERACT
MASTER
RZ
SZ
UPKEEP**

2. Make a permanent assignment for TMP: in your startup- sequence. You may wish to assign this to ram: if you have more than 1.5 megs or create a directory called "Temporary" on your storage device. Also make an assignment for JMP: and one for BRU:.
3. CD to BBS: and enter "RUN CONVERT" from a CLI. This non-destructive process creates the required "Userlog.active" and "Dabase.active" files from your existing "Userlog" and "Dabase" files. Do NOT delete the original files until you are sure everything is working properly.
4. Execute the script file "MoveFiles" (found on the Skyline disk). This creates a directory within TXT: called "Envir" (TXT:Envir) and moves almost all the environment files to this directory. You will have to move "Urgent" (named) text-files there yourself. Create another directory within TXT: called "Help" (TXT:Help); your help files will have to be edited to correspond to each menu and placed within the TXT:Help directory. They are named after the associated menu, with an extension of ".hlp". Examples: main1.hlp, Amiga.hlp, etc. The exception to this is the help file for the message-base editor, which is named "MBEditor.hlp".
5. RUN MASTER, select "Configure" from the WINDOWS menu, then change your modem setup string so that it does NOT put your modem in auto-answer mode (i.e., change S0 = 1 to S0 = 0 for Hayes-compatible modems). Note that this is the OPPOSITE of how it was set for Atredes 1.0.
6. Skip down to the section on the CONFIGURE window and check the settings on all the items, especially the "NonMember" and "NewMember" flags, the "Comment" area, and the default main menus (set these to 1 for now). You can create a comment area while you're here if you wish, or assign the Comment area number to an existing message base.

You can now begin creating your own menu trees (see below).

NOTE that you must NOT use any of the ARexx utilities that were designed to work with 1.0; doing so is VERY likely to scramble your files. Enough new capabilities are included in the 1.1 system to make most of these utilities unnecessary.

Converting from Atredes 1.0

Installation

CONVERTING FROM ATREDES 1.1

This is simple. Just replace all the files in your BBS directory with the corresponding files on the disk. Delete ATREDES and replace it with SKYLINE; rename your ATRBatch file to SKYBatch; install AREXX if you have it, and make an assignment for BRU:. Create empty text files called S:SKYBATCH (if you weren't using ATRBATCH already) and S:SKYDAILY. That's all there is to it! You also need to run all your menus through the new menu compiler to fix a display bug. Also, due to this bug fix, you need to edit your online Skypix files to put a HOME CURSOR (ESC [H) before every CLEAR SCREEN. This includes your custom Skypix menus. If you don't do this, you will experience graphics overwriting your screen. This symptom is a dead giveaway of this problem. If your menus unexpectedly scroll up, reduce the line number in the corresponding cursor positioning ANSI command by one (1). This also applies to any text printed in inappropriate places.

CONVERTING FROM OTHER BBS SYSTEMS

If you are moving to Skyline from some other BBS system, follow the instructions for "new users" given above. Assign the databases to wherever the database files currently reside, or take this opportunity to reorganize them; you might want to physically split the files into different directories to take advantage of the system's split-database capabilities.

From the Skyline WINDOW menu, choose DBUPKEEP; within DBUPKEEP choose the "Adopt Orphans" menu item. This utility will go through all the files in each database one at a time and allow you to enter a description for each one.

There is currently no utility to directly convert system files from other BBS software into Skyline files. All users will have to be re-registered. This can be done by you (by hand), or by starting your users over from scratch.

CONFIGURING YOUR SYSTEM - The CONFIGURE Window

Once you have physically moved the required files into place, created the necessary directories, and made the proper ASSIGNS, you are ready to start customizing your system the way you want it. This is done with the program called "Configure". From the Main Skyline window, hold the right mouse button down and select 'Configure' from the Windows menu. Be very careful in entering data into this program; if you don't understand what you are doing you may cause mass confusion. If you have followed the procedures outlined earlier, you should have a default configure file already in place. We strongly recommend you read both this and the following chapter

**Converting from Atredes 1.1
The Configure window**

Installation

before making any changes.

CONFIGURE MODEM COMMANDS

MaxBaud - The maximum baud rate your modem is capable of using, and the baud rate it is set to upon power-up. Note that the modem must be capable of automatically selecting baud rates in software. At least one brand of modem sets the baud rate by means of a button on the front. These are not suitable for running any type of BBS system.

MinBaud - Set this to "300" if you want to allow 300 baud users online. If you decide that you want to lock out certain speeds, set this to the minimum baud rate required to get on your board. See the "TooSlow" entry in the TEXTFILES section.

Prep - This is the command your modem uses to reset to power-on conditions. For most (Hayes-compatible) modems this is "AT Z".

Command - This is the most important setting of all. If you have trouble getting your modem to interact properly with the BBS, this entry is almost certainly the culprit. Command strings vary from modem to modem, even among those advertising themselves as "Hayes compatible". A little experimentation might be necessary here. This command must tell the modem the following things:

1. Turn OFF command echoing (usually E0).
2. Turn OFF autoanswer mode (usually S0 = 0).
3. Select extended command set (i.e., CONNECT 1200, CONNECT 2400 etc.).
4. Select verbal result codes.
5. Set your escape character to something besides "+".
6. Reset when carrier or DTR line are dropped (sometimes set with DIP switches).

Read your modem manual carefully in setting these.

Busy - This is the code that is sent to the modem when you log on locally, to make the system appear to be busy. The best method is to take the phone off the hook with ATH1, but some phone companies whine about this, so you may have to disconnect the phone line by turning the modem off. You must do one or the other, however; if you allow the modem to answer the phone while you are logged on locally, the system is guaranteed to hang.

Delay - The amount of time (in 60ths of a second) between sending the "Prep" string and the Command string. Most Hayes-compatible modems require

The CONFIGURE window
Modem configuration

Installation

The CONFIGURE window is divided into two main sections. The left section, titled 'System Parameters', contains fields for:

- ModBaud: 2400
- MinBaud: 1200
- Prep: AT Z
- Command: AT+C1H0E0X1S0=0S2=92M0
- Busy: ATH1
- Delay: 90
- Log: BBS:LOG
- Font: PEARL.FONT
- Buttons: MessBases, DataBases, TextBases
- Xtra 1: How old are you?
- Xtra 2: What computer do you own?
- Xtra 3: (empty)
- NonMerMin: 0, NonMerMax: 1
- NonMerAcc: 0, NonMerAcc1: 1
- NonMerLin: 10, NonMerLin60: 60
- Buttons: NonMemberFlags, NewMemberFlags

 The right section, titled 'Message Areas', is a table with 20 rows and 3 columns: Message Area, Access, and a checkbox.

Message Areas	Access	
1 LOUNGE	0	☐
2 AMIGA	0	☐
3	0	☐
4	0	☐
5	0	☐
6 C CLASS	0	☐
7	0	☐
8 BULLETINS	0	☐
9 SKYLINE SYSOP FORUM	10	☐
10 EMAIL	0	☐
11 META TESTERS	11	☐
12	0	☐
13 COMMENTS TO SYSOP	255	☐
14	0	☐
15	0	☐
16	0	☐
17	0	☐
18	0	☐
19	0	☐
20	0	☐

Figure 1. The CONFIGURE window. The left half of the screen is mostly for setting system parameters; the right half serves three purposes, for message, text and databases. The mode is chosen by the three labeled gadgets in the left half.

1 full second after a reset before accepting any further commands. A safe value for this variable is 90.

MODEM SETUP EXAMPLES

Practical Peripherals 2400 baud modem:

Prep string: AT Z
 Command: AT+C1H0E0X1S0=0S2=92M0&D3
 Busy: ATH1&D3
 Delay: 90

Supra 2400 baud Modem:

Prep string: AT Z
 Command: AT+C1H0E0X1S0=0S2=92M0
 Busy: ATS0=0
 Delay: 90

The Supra appears not to appreciate being taken off the hook to appear busy, and after a minute or so seems to hang up the line again. This will definitely cause problems if someone calls. The answer is to use a Busy string of "ATS0=0" when using a Supra (and possibly some other) modems. This is a good example of differing behavior among "Hayes compatible" modems.

The CONFIGURE window
 Modem parameters

Installation

1200 baud modems:

Prep string: AT Z

Command: ATH0E0X1S0=0S2=92M0

Busy: ATH1 (or turn off your modem)

Delay: 90

The settings for carrier-detect and DTR (Data Terminal Ready) are usually controlled with DIP switches on 1200 baud modems. Remember that the key settings are:

1. The modem should reset when the DTR line is dropped
2. The carrier detect pin must NOT be "forced" (switch-selected) true; it must reflect the real state of the remote carrier.
3. On some modems there will also be switches to turn off command echoing and to set verbal result codes; check that these are set correctly.

HST 9600 Baud Modems:

Prep String: AT Z

Command String: AT&H0E0S0=0X4S2=92M0&K0

Busy String: ATS0=0 or ATH1

Delay: 90

Dip Switch -1--2--3--4--5--6--7--8--9--10 QUAD SWITCH

Factory settings	D	U	D	U	D	D	U	D	D	U	UP
Skyline settings	U	U	D	U	D	D	U	D	D	U	UP

Skyline in the connect sequence looks for certain messages, for instance, Connect 1200,2400,9600. It will not accept any of the other types of result codes. The HST transmits ARQ result codes (ie.Connect 9600/ARQ) at baud speeds of over 2400, Skyline doesn't like this addition to the result code, and will disconnect your users every time. To Disable the /ARQ codes and store them, from your terminal enter the following. [AT&A0&W {return}] the modem will respond with the 'OK' result code. This enters that parameter into the NRAM settings so that you won't have to keep setting this command. It doesn't interfere with operation of the modem with other terminal programs.

Other HST notes: Users that are using modems other than the HST, with MNP error checking, may have trouble connecting to a HST. To correct this, they should turn off the MNP error correcting mode on their modem. I've heard many people who own HST's complain about not being able to connect with other bbs's that don't use the HST. Usually, even tho the line will ring and the modem answers, they will get a

The CCNFIGURE window
Modem setup

Installation

'Busy' or a 'Voice' result code. This problem is caused by distortions in the answering modems carrier tone frequency causing the HST to return a 'Voice' signal. The solution is to set the Result Code settings to a setting that will not display the faulty code... This will not interfere in the operation of the modem, but will allow connection where none was possible before. To do this, from your terminal program enter 'ATX4 [return]'. This will disable the 'Voice' result code allowing connection sequence to complete.

(The above advice on HST's is courtesy of John Kendrix.)

Some common problems with all modems and their solutions:

- * **System only connects occasionally:** Change ATS0=1 to ATS0=0.
- * **System doesn't detect a dropped carrier:** Carrier-detect line is being forced true. Check DIP switches, if any.
- * **System doesn't hang up on a user at the end of a call:** DTR line is being forced true. Check DIP switches.

USING SKYLINE WITH EXTRA SERIAL PORTS: ARGUMENTS FOR MASTER

The MASTER program is the main "launcher" for the BBS. It takes several options:

- i = Open in Iconified mode (for max memory and speed)
- q = Open in Quiet Mode
- ux = Use unit x
- dname = Use device 'name'

These can be used in any order and combination.

At this time Skyline CANNOT be run on more than one line simultaneously. You can, however, make Skyline use any serial port you have. To do this, instead of running the program with the -u and -d options specified, as in:

```
run master -u0 -dsiosbx.device
```

A limitation of this is that the RZ and SZ modules do not currently have this flexibility. All you can do for now is go in with a sector editor and change all references to "serial.device" to the device you'll be using. You are forced into using unit 0, however.

SYSTEM CONFIGURATION OPTIONS:

Log > - This is where you want your log file sent to (this MUST be specified).

**Modem troubleshooting
Using Skyline with serial cards**

Installation

The system is capable of recording everything that happens during the day for later review. You may send this anywhere you like, for instance "RAM:Log" or "BBS:LogFile", or even to the printer with "PRT:". If you don't want a log kept, set this to NIL:. If you leave it blank the system will hang as soon as a caller enters his name.

Font - The font you'd like to use. Must be an 8-point, non-proportional font. Make sure the ".font" extension is on the end of this specification. An attractive public-domain font called "Pearl" is included on your Skyline disk. To install it, specify PEARL.FONT as your font of choice, and enter the following command from a CLI window:

copy Skyline:Fonts all to fonts:

You must not leave this entry blank. If you want to do PC character graphics in conjunction with ANSI, use a font that contains the PC graphics characters (such as the clean IBM, supplied).

CONFIGURE USERS OPTIONS

Xtra 1,2,3 - These are extra questions that may be chosen by you to insert into the registration questionnaire. The answers will become part of the caller's permanent record. See the 'Multiple Choice Questionarre' and 'Embedded Command' Sections for more elaborate questionnaires. The advantage of these Extra Question answers is that they can be used to do keyed searches through the userlog for various things. Also, they are available for use by an AREXX program.

Default UL/DL Ratio - This controls the number of files a user is allowed to download for every one he uploads. This number is only the "default", the value assigned everyone as soon as they register. It may be changed on an individual basis later. If you don't want to enable the UL/DL ratio, set this to zero. This will disable the feature entirely.

NonMemberAccess - This is the access level you want to assign people who have not gone through the registration sequence. This will usually be zero, unless you are running a totally open board. It should be zero if you intend to individually validate each user before allowing them further privileges (see VALIDATION).

NonMemberLimit - The time limit, in minutes, that an unregistered caller is allowed on the board. NOTICE that both this AND the Access settings change immediately to the NewMemberAccess and NewMemberLimit settings upon registration - during the SAME CALL.

NewMemberAccess - By setting this to a value other than zero, new members (those
System configure options

Installation

who have completed the questionnaire) become validated immediately and placed at this access level. Again, this should be left at zero if you want to individually clear each registrant before allowing them deeper into the system.

NewMemberLimit - The time limit a user gets immediately after he registers. One thing is important to notice here: The NewMember settings, including the flags discussed below, become the user's permanent settings unless changed on an individual basis by the SYSOP.

NonMemberFlags and NewMemberFlags - The privileges assigned to nonmembers and newmembers, respectively. Clicking on either of these opens a new window with the following gadgets, which may be set any way you like:

ONL - Online. If this isn't selected, the caller isn't allowed on at all. For a nonmember, they are shown the "NonMember" textfile and immediately disconnected. Note that this allows you a great amount of latitude in your registration procedure. For example, say you want to allow nonmembers on long enough to let them register, then not allow them on at all again until they've been verified. Set the NonMember ONL flag ON, the NewMember ONL flag OFF, the other NonMember flags OFF, and any flags you want ON for NewMember (the flags are meaningless, of course, until the ONL flag is set back ON for that user). Set the Access for both to zero. Now a caller may call, join, not get anywhere else, and not get online at all again until you validate him. When you do, you set his access and privilege flags any way you like.

MSG - Messages. If this is not set, the user can't select the message base from the main menu. If it is set, the user may get to Area 1 and any other area allowed by his access level and menu path (see Message Base Access).

TBS - Textbases. If set, the user may get to any text library allowed by his access level and menu path. If not, he can't get to the text libraries at all.

DBS - Databases. If set, the user may get to any database allowed by his access level and menu path. If not, he can't get to the database area at all.

ENTR - Enter messages. If not set, the user may read messages at will (according to his access level and menu path) but cannot send or reply to any.

PRVT - Private mail. If set, the user may send private EMAIL to other members. If not, all his messages are public.

CHAT - If set, the user may request a Chat with the Sysop. If not, he can't. Appears the same either way from the user's end (to avoid griping) but if flag is not set, does

User config options
NonMembers vs. NowMembers

Installation

not actually page the SYSOP.

UPLD - Controls whether a user is allowed to upload anything, anywhere at all.

DNLD - Controls whether a user is allowed to download at all. If these are not set, the user can't download or upload anything, even if his access allows him in an area that otherwise allows it.

ELSE - Controls whether the user is allowed in the SkyDoors area.

The remaining aren't really "privileges", but are sometimes useful:

LF? - Linefeeds. Controls whether a user gets linefeeds or not.

XPT? - Expert. Controls whether or not the user is currently in Expert Mode (see EXPERT MODE).

It is important to mention once again that the change from the NonMember limit, access and flag settings to the NewMember counterparts occurs IMMEDIATELY after the user registers; they take effect at the very next command prompt, on the same call. Once you have set these flags the way you want them, click on that window's "Close" gadget to continue.

The remaining three gadgets on the left side of the page, called MessBases, DataBases, and TextBases, affect the current setups being displayed on the right side of the page. We will now set up your message bases. Follow the following instructions carefully!

CONFIGURING YOUR MESSAGE BASE SIGS

The SIGS (Special Interest Groups) in Skyline are truly independent of each other in a way that no other BBS program allows. Each has its own message numbering local to that message base and a whole range of settings that may vary from area to area. You may have virtually any number of message bases, textbases, and databases that you want. Here's how to go about setting them up.

THE STANDARD CONFIGURATION: Your system is already set up to support 60 areas each in the message bases, text bases and databases. This should be enough for even the largest systems. If you need more, though, clicking on the DOWN arrow to go past the number 60 will automatically create new areas for you, 20 at a time. Easy on the button!

It is strongly recommended that you read and thoroughly understand the " Menu Trees"
Privilege flags - meanings

Installation

section, and specifically the Defining Ranges section, before configuring your Message bases, Data Bases and Text Bases (See Chapter 5).

If you have deleted the MBases file, you **MUST** first click the mouse on the MessBases gadget. You will be asked how many areas you want to create. The same thing will happen with TextBases or DataBases when selected, if you have deleted those files.

Now click in the string gadget just to the right of the number 1 and enter the name you want to be assigned to Message Area 1. (Keep in mind that **EVERYONE** who is allowed in the message base at all is allowed in Area 1, so this is a good place for your "General Messages" area.) When you hit [RETURN], a requester will ask you if you intend to "coldstart" this area; answer YES (this erases everything in the area and creates the necessary directories and files if they don't already exist).

A new window appears that allows you to configure this area the way you want it. Note that not all of these settings are meaningful in this release; they are provided to ease future expansion. The ones that are currently enabled are:

Enable automatic upkeep - When this is selected the message base will clean up after itself on a daily basis.

Maximum # of Messages - The maximum number of messages the system will retain in this area, **NOT COUNTING** undelivered ones (see next option).

Retain undelivered - If selected, undelivered messages will be retained no matter how old they are.

EMAIL Only - If selected, **ALL** messages in this area will be private. (In this case, unlike the rest of the board, the member's High Message counter will be updated when reading Personal mail.)

READ ONLY AREA - No one but the SYSOP and SIGops may enter messages in this area, but anyone whose access allows it may read the messages.

ACCESS ONLY AREA - **ALL** message bases have an access level assigned to them (see below); a user with an access level lower than this assigned level cannot get to them. The difference between this and an "Access Only" area is that **ONLY** those users with **EXACTLY** the right access level (not counting SIGops and SYSOPS) may get to this area. This flexibility allows for up to 250 private "rooms" that may be entered only by those with exactly the right access.

Installation

HIGH SECURITY AREAS - When this flag is set, a user is asked to enter his high-security password before he is allowed entrance. The four-character High Security password is set in an invisible gadget in INTERACT just to the right of the ACCESS gadget. It can be CHANGED but NOT SEEN, even by the SYSOP.

LOCKED AREAS - This means locked IN, not out. Once a user enters or is placed in one of these areas he CANNOT get out of it without help from the SYSOP. It may not be immediately apparent how this would be useful, but people who want to run completely isolated boards for totally different groups, such as two different departments within a business, may find this a very helpful feature. In effect, they are in a locked room all by themselves, totally isolated from the other message bases. A caller may enter this area, but once in, he can't get out without your help (from the User Settings page of the UPKEEP program). If you want to prevent others from entering, use the other security features appropriately. All of these flags may be combined in any way that suits your needs.

When you have these set to your liking, select "OK". Before we go on, note that you don't have to rename a message area to get to its control page; you may do the same thing by clicking the arrow-shaped gadget at the end of each line.

TO RENAME A MESSAGE BASE WITHOUT "COLDSTARTING" IT: Go to the Message Base Detail page. Give the area a name HERE and hit RETURN.

The last thing needed to make each message area operational is to set the access level. The gadget under the heading "Accs" does this. Again, people whose access level is lower than a message base access level cannot get to or even see that area (except for area 1, which anyone who is allowed in the message base at all may access).

Remember that these gadgets require you to hit [RETURN] when finished to "lock in" your changes.

Simply repeat this operation for all the message bases you wish to open up. Use the up-and-down-arrow scroll gadgets at the far right to scroll through the list of areas.

SETTING UP DATABASES

28

Tell the system that we now wish to turn our attention to the databases by clicking the "DataBase" gadget.

Message base types
Renaming message bases

Installation

Message Base Detail

COMPANY TO SYSOP High Msg. 440 Low Msg. 366

☒ Enable automatic upkeep

50 Max number of messages

☐ Retain Undelivered

☐ Locked message base

☐ 'Access Only' message base

☐ 'Read Only' message base

☐ High Security message base

☐ EMAIL (Private) Only

Save Cancel

Figure 2. The message base detail page. This page is reached from CONFIGURE by selecting the arrow-shaped gadget at the end of the line in the first window.

Setting up databases is very similar to setting up message bases. You give them names and access levels in the same way. There is one additional setting, though; the little gadget between the Access gadget and the arrow selectors is for database DIRECTION. You may choose to allow uploads only, downloads only, or both in any database. For instance, if you wanted to approve all uploads before allowing them to be downloaded, you could make one area for uploads only, the rest for downloads only, and then move the new files to appropriate areas yourself. Use D to indicate download only, U to indicate upload only, and B to allow transfers in both directions. Note that the arrow gadget at the end of each line has no function when referring to databases.

An additional option that some will find very handy is the capability to specify an area as a "personal transfer" area. If you enter the direction as A (for Addressed), that area becomes available for one user to send a file specifically to another user. The file is invisible to anyone except the addressee. This in effect allows users to have personal storage areas, like some of the larger networks.

Individual directories are not required for databases; proper routing and storage is handled by the ASSIGNS in your startup sequence.

SETTING UP TEXT LIBRARIES

Renaming message bases
Configuring databases

Installation

This is just the same as setting up message and databases, except that only a name and an access level are required. You must create a numbered directory within the TXT: device for each area you activate; TXT:1/, TXT:2/, etc. See the Text Library section for more information.

FINISHED?

When you have set up everything just the way you want it, click the SAVE gadget to finalize the entries. Then click the CLOSE gadget or CANCEL to exit the Configure program.

Skyline, the main program, looks at its configuration file ONLY when it first boots up. If you change anything in the Configure program while Skyline is running, it will IGNORE those changes until you stop Skyline and run it again. Remember this, or you will get confused. Also, make sure everything is running correctly BEFORE allowing users online, or subtle discrepancies may occur. For instance, if users use the message bases for a while and you then shift things around or restart them, their user settings, high messages, and Active Areas list may all become confused, and you might even have to erase the userlog and start all over. Avoid this by double-checking everything before you go online.

Menu Trees

MENU TREES

SKYLINE is a uniquely flexible system in many ways. Nowhere does this flexibility manifest itself more than in the menus. You have almost total control of what happens in your system and how large it can be.

Let's start with the basic concept of "menu trees". When anyone logs on to any sort of bulletin board system, they eventually get to a menu. They may see textfiles, bulletins, graphics, etc. when they first log on, but eventually they will reach a point where the system stops and waits for a response from the caller. We can think of a "menu" as a **DECISION NODE** where a decision from the caller is necessary. It is usually accompanied by some sort of list of commands that makes it clear that this is a menu prompt, but it need NOT be. This distinction will become important when we start getting fancy later on.

The decisions can be separated into three classes: **COMMANDS**, which are direct orders to the BBS to perform some definite function (such as "Read New Messages"); **SUBMENU CALLS**, which are simply branching to other (deeper) menus; and a special command, **PREVIOUS MENU**, which acts like a 'return' in a subroutine, popping you back to the previous menu. (In effect, it's the opposite of a submenu call.) Since these deeper menus are reached through "higher level" menu choices, they are considered to be **SUBMENUS** of the calling menus.

In Skyline 1.2, a menu tree is simply a "Main" menu or starting point, with any number of other menus hanging beneath it like leaves on the branches of an upside-down tree. Like a real tree, the degree of sub-branching and expansion is not arbitrarily limited. You may place any command in any menu; you may assign any letter to any command, even changing the letters between menus; you may hang up to ten submenus from each menu; and there are a variety of new, powerful controls to augment the functions of the menus.

At this point, it is important to understand that in Skyline 1.2, *all menus are created equal*. This means simply that ALL menus have exactly the same

Menu trees - background info

Menu Trees

scope of possible actions. You, as SYSOP, choose what you want each menu to be able to do, or even if you want a particular menu at all. You also choose how a menu calls another menu. Keep in mind that the terms "Menu" and "Submenu" have meaning only in the context of two specific menus and their relationship to each other. There is really no such thing as a "submenu" as far as Skyline is concerned, only menus.

Circular References

In a Skyline system, any menu can "call" any other menu. Thus, it is IMPORTANT to make sure that two menus are NOT able to call EACH OTHER. For example, the system should not include a menu named "Amiga" that can call a submenu named "Files" if Files contains a selection to call the menu named Amiga. This would have the effect of forming a loop in your tree. Like a real trunk-and-leaf type tree or a spreadsheet with a circular reference, this is not allowed; this practice would result in the stack overflowing if the user stayed on-line long enough. All would sort itself out at log-off, of course, but it's not a good idea.

The proper way to move back up the tree a level at a time is by using the command "Previous Menu". You can think of this as equivalent to "popping" that menu off the stack and resurfacing to the previous menu. Internally, in fact, this is precisely what happens. You can make certain this happens correctly by not building trees with built-in loops. Plot it out on paper if you need to.

BBS SYSTEMS, SPACE-TIME, AND PENROSE DIAGRAMS

(A little astrophysicist humor there...)

The whole bulletin board system rotates around a menu named "Main". In the bulletin board, the Main menu, with its associated tree under it, is the entire universe to a caller. Everything that is possible during a log-on descends from and leads back to the Main menu.

Like the concept of multiple universes in the physical world, there can be more than one menu path in Skyline, each descending from its own Main menu. The "travelers" along each path can be completely invisible to users of other menu paths. In fact, there can be up to 255 Main menus, all distinct, all with distinct and possibly large trees hanging from them. It is possible to determine in several ways which Main menu a particular caller gets permanently assigned to. It can be done semi-automatically by the system or manually (through the "Interact" program), and changed at will. This is the "ultimate" method of breaking the board into pieces for different interests. However, it is usually better to use the more common access-locked menus (described later) for this purpose and save the multiple-Main feature for

Circular references in menus

Multiple MAIN menus & trees

Menu Trees

circumstances where you really need it.

It is no more possible for the user to move to other Main menu trees without assistance than it is for you to peek through a black hole and see the other universe that may exist on the other side. Menu trees may connect internally; for instance, the Main menu for SysOps and the Main menu for normal members might both have access to the same message base menus, and both sets of users would be able to mingle there. Remember, the caller's possibilities online are completely pre-ordained by what the Main menu and its tree offer him. There is no way for the new member to "swing across" to the Sysop's menu tree and continue from there, even though their "branches" may touch at some points.

The Main menus are named "Main0" through "Main255", although they all (in compiler-generated menus, and in your own if you desire) show up to the user as "Main". The numbers 0 through 255 are arbitrary and bear no connection with access levels, etc., and the user never actually knows which Main they're in unless you choose to let him know in the menu's text.

Since ordinary text-files can call menus (by the use of embedded commands), it's possible to get really fancy by using the other "environment" textfiles that appear before the Main menu as jumping-off places into another tree... one that may not even ever get to Main at all. You could have distinct automatic menu trees for members and nonmembers by calling an appropriately designed menu from within the "Member" and "NonMember" textfiles. You could even go all the way and hang a menu tree off the "Urgent" textfile, the one named by the member's name. That way it would actually be possible to have distinct, personalized menu trees for EACH user! Another possibility is to hang the tree from the "AccessXXX" textfile (where XXX is the access number), thus linking the 255 access levels with the 255 Main Menus. Of course, you can use any or all of these in any combination.

If you take advantage of tricks like this, remember that if you want one of these pseudo-main menus to actually log a caller off like a real one, put the command "Goodbye" but NOT the command "Previous Menu" in it. If "Previous Menu" were chosen from such a menu, since this menu is NOT in fact a "submenu" at all, it would fall through to continue the logon sequence just like any other text-file normally would and proceed to the member's assigned MAIN menu, defeating your intentions.

THE MENU POSSIBILITIES

Here is a listing of what is possible with the compiled menus:

- Any BBS command can appear as a choice in ANY menu and have ANY letter for its code. These letters can be different for each menu, if desired.

Tricks with menu trees
Menu capabilities

Menu Trees

- The number of layers in your menu structure or "tree" is wide open. You specify what submenus are available from any given menu (currently up to 10 for each). These are not specifically "database menus", "message menus" etc. until YOU give them a name and function. You specify what ranges of MB, DB, or TB areas the menu can reach, and you decide what commands are in it. For instance, nothing prevents you from putting "Chat Request" in all or none of your menus. The menus can be nested in this way up to any level.
- Each menu can LIMIT the range of message, text, and database areas available from that menu. Excluded areas are completely inaccessible while under that menu's control. This allows the creation of "sub-boards", truly independent areas for special interests, each with a number of dedicated (contiguous) MB, DB, and TB areas for their use alone. You can tell the menu to insert the familiar message base or database introductions, i.e. "High message is XXX; you have read through XXX" etc. into your menu for you.
- Each menu has an access level associated with it. If the menu has an access level higher than the member's, he cannot reach it - or even see it, if the calling menu is properly designed. In this way, part of a menu's text can be locked by access level to avoid displaying the entire menu to people who can't use all of its options. Also, the text can be RESUMED at a chosen point for graphic reasons such as a bottom border, etc. All of these options can be handled automatically by using the menu compiler (the codes for doing it manually appear below).
- Expert mode still works as before; a one-line menu is generated from the menu file itself for this purpose. The Expert menu is also seen when a string of several commands is entered, as the system moves from menu to menu to act on the commands.
- The dividing line between menus and ordinary text files is now quite hazy. Using the many new embedded commands, a text file can trigger a menu, make multiple-choice and yes/no decisions, trigger BBS commands automatically, take intelligent action to alter various entries in the user's permanent record, inject a user into a SIG, start an AREXX macro and much more. These features allow such things as even deeper menu trees triggered from a text area, questions such as "Do you want to see the newest uploads?" that proceed to do so with an appropriate response, an "Are you sure?" question at logoff, etc. The only practical difference between menus and text files is that a "menu" will automatically stop and ask for a command input at the end, and will LOOP until another menu is called or until "Previous Menu" is chosen.
- All menus and text files can use all the standard "@" embedded commands, embedded SkyPix commands etc. in any combination within certain arrangement

Menu capabilities

Menu Trees

rules relating to the menu control codes.

- As mentioned above, you can get creative and hang a menu tree off the "NonMember", "Member", or "AccessXXX" text files. This way you can have a separate system for members and nonmembers (notice that once a nonmember joins, he is automatically kicked into the main system), separate systems for different access levels and even separate systems for EACH PERSON, by hanging a menu tree off their "Urgent" textfile.

Now for the bad news. Our apologies to those who liked the English parser in Atrades 1.0, but it's long gone. The wide-open state of affairs in the new system makes the idea almost impossible to implement in a reasonable way (so far, at least). The good news is that there is a substitute for novice users that is even easier: SkyPix gadgets.

SKYPIX GADGETS

A new demo terminal (Skyterm 1.2) that supports XModem, YModem, and ZModem uploading and downloading is now available and is supplied with this package. This terminal is not in the public domain (it IS copyrighted), but it may be redistributed freely through bulletin boards, hand-to-hand, etc.

To make a long story short, the new terminal (and Skyline itself, of course) has a "gadget" specification that draws gadgets and allows a remote user to select menu options with his mouse by single-clicking on them. These act just like standard Intuition gadgets. The selected item turns black and the option is then executed immediately. Up to 20 SkyPix gadgets can appear in any menu. If you don't want a gadget to appear as a rectangular box, draw the box-gadget in black and put your own design over it.

AN EXAMPLE MENU TREE

For this discussion, consult the accompanying diagram. You will see at the top the Main menu; we will arbitrarily say that it's Main10. Note first of all that it has NOTHING TO DO with Main9, right beside it. We are pretending that Main9 is for the Sysop's personal business, and Main10 is for his regular BBS callers. Just to demonstrate that they CAN have points of contact, we allow them to "touch" at the ONLINE_GAMES menu. (Menu names must NOT have spaces in them.)

We ignore for now the commands that can appear in the menus; it should be understood by now that ANY command you deem appropriate can appear in any menu. We're considering only the "tree" itself: the branching of the submenus.

Our menu branches out in three directions. We have submenus for Amiga, for

Skypix gadgets
Menu tree examples

Menu Trees

Commodore, and for VIP's. We have decided to let everyone in the first two areas; therefore we have given those choices an access level of zero. (We did this from the Menu Compiler when we generated Main10, by entering 0 in the access gadgets for these two submenus.) However, we decide that the VIP area will be locked off to anyone below an access level of 10 (we did this the same way). Not only is it inaccessible, the choice itself is INVISIBLE to persons under access 10, even though they are viewing the same menu file.

When we CONFIGURE'd our system, we made message areas 2 through 20 Amiga areas, 21 through 40 Commodore areas, and 41 through 60 VIP areas. When we generate those menus, we put these values in the Message Base Low and High area gadgets. Now when people choose one of those menus, they are automatically moved to the LOWEST numbered of these areas that they have Joined. (If they aren't members of ANY of them, the system won't let them choose this menu. Either put a Join SIG command in the Main menu, or inject them there yourself by using the @J embedded command - possibly in the POSTREGISTER file.) We can do this trick with database areas and textfile areas as well. The only requirement is that the desired areas be CONTIGUOUS; you can't for instance have access to areas 10, 20 and 40 only. You'd have to arrange them so you can specify an inclusive HIGH and LOW area number.

This example is intentionally very simple. It doesn't illustrate any of the possibilities that can be implemented with embedded commands or "intelligent" environment files. Those topics are covered in the Embedded Commands section.

CONSTRUCTING MENUS

All menus, and most environment files, have three versions: "menu" (ASCII/plain text), "menu.ANS" (ANSI text/graphics), and "menu.SKY" (SkyPix graphics). The Menu Commands and Skypix sections give exact instructions on how to construct menus by hand; this is, of course, the most powerful method for producing menus with your own graphic arrangement, but it can be quite tedious, especially when constructing a SkyPix menu. This option is available for those who want to take the time, but there is a MUCH easier way; let the menu compiler generate your menus for you (which can then be edited, within limits, to fine tune them).

THE SKYLINE MENU COMPILER

The menu compiler included as part of Skyline 1.1 automates the construction of menu trees. It allows control over the commands, letters representing them, sub-menu names and accesses, area limitation, etc. You can construct your menu

Menu tree examples
Constructing menus

Menu Trees

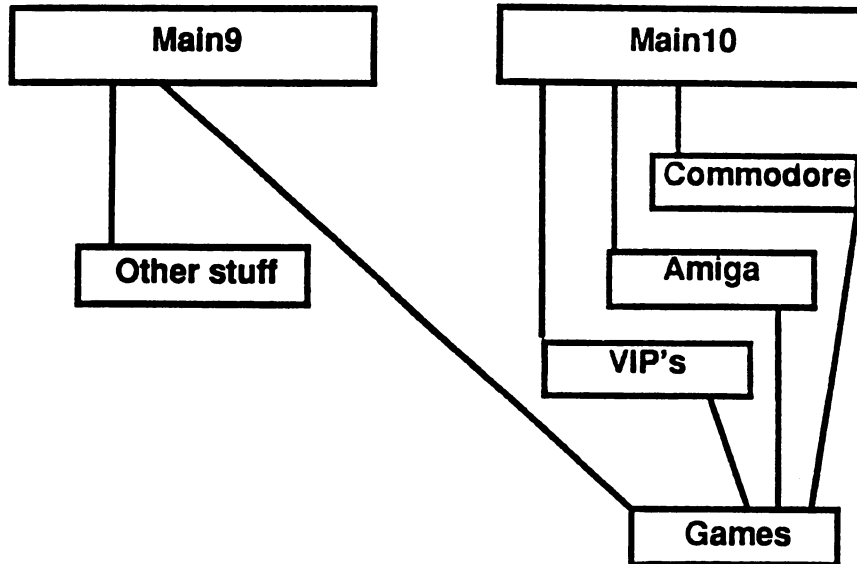


Figure 3. Graphic representation of a very simple menu tree pair. Though the two Main Menus are completely independent, they can have SUBMENUS in common if desired. They could equally easily have no points of contact at all. Note that persons who got to GAMES from MAIN9 cannot move up the tree to the VIP, Commodore or Amiga areas; likewise those users cannot move up to MAIN9.

tree very quickly with the menu compiler. It has been made as powerful as possible so that you don't have to get into the gritty details of menu construction unless you want to.

It is HIGHLY recommended that you sit down with pencil and paper and map out (create a flow-chart of) your system before attempting to generate the menus for it. Skyline gives complete power to the SysOp; this power can be abused as easily as it can be used properly. Members of a BBS can suffer a lot of frustration if the Sysop creates a mangled, unintelligible, or incorrect menu tree. The larger and more complex your board will be, the greater is the need for logical organization. In other words, the Menu Compiler is similar enough to a programming language that it's possible to write some real "spaghetti code" with it. As in writing programs, have a clear idea of your goal before you start coding.

Operation of the compiler is practically self-explanatory. To start with, let's do a sample MAIN menu. Enter the word "MAIN1" in the "Menu Name" gadget. Remember, this is a MAIN menu that will be seen by people whose Main Menu setting is 1. This is a good place to start out with everyone.

Menu Trees

SKYLINE Menu Compiler

Menu Name

MBase Areas - Low ☐ High ☐ 10 Submenu 1

DBase Areas - Low ☐ High ☐ Submenu 2

TBase Areas - Low ☐ High ☐ 10 Submenu 3

Submenu 4

Submenu 5

Submenu 6

Submenu 7

Submenu 8

Submenu 9

Submenu 10

Figure 4. Above, the menu compiler main window with a menu named "Amiga" loaded. Two submenus are specified, one for DATABASE and one for C CLASS.

Menu Commands

☐ G Log Off	☐ F Search Messages	☐ List Files (short)	
☐ Q Previous Menu	☐ K Delete Message	☐ New Files (short)	
☐ Registration	☐ M List SIG Members	☐ Complete Files Cont.	
☐ User Settings	☐ C Continuous Mode	☐ Download/Logoff	
☐ Chat Request	☐ J Join a New SIG	☐ Move a File	
☐ Help	☐ Change Database Area	☐ Submenu 1 Acc. B	
☐ Userlog List	☐ Change Protocol	☒ X Submenu 2 Acc. B	
☐ Elsewhere	☐ View an ARChive	☐ Submenu 3 Acc.	
☐ Text Library	☐ Find File	☐ Submenu 4 Acc.	
☐ Read Newsletter	☐ File Info	☐ Submenu 5 Acc.	
☐ Comment to SYSOP	☐ Upload	☐ Submenu 6 Acc.	
☐ Enter Message	☐ Kill a File	☐ Submenu 7 Acc.	
☐ New Mail - Global	☐ List Files	☐ Submenu 8 Acc.	
☐ New Mail - Area	☐ New Files	☐ Submenu 9 Acc.	
☐ Sequential Read	☐ Complete Files	☐ Submenu 10 Acc.	
☐ Personal Mail	☐ Download		
☐ Change Message Area	☐ Drop to DOS		

Figure 5. The "command window" of the compiler. By assigning a letter to one of these commands, the command becomes active for this menu. When satisfied, we select ACCEPT and generate our menus.

The menu compiler - options

Menu Trees

As in the menu tree example, we will start with an example board with two major groups of users: "Amiga" and "Commodore" (8-bit). We will give these two groups their own separate systems by letting them choose from the main menu.

Enter the word "Amiga" in the string gadget for SUBMENU 1 and "Commodore" in the gadget for SUBMENU 2.

Now select the "Commands" menu option. A window appears listing all the BBS commands currently available. To activate a command for this menu, simply place the desired command letter in the string gadget beside each option. Just make sure you don't re-use the same letter in two commands (for now, be sure to activate the "Change Settings" command; you will see why presently). At the far right you will see the selection area for submenus. Enter an A (for Amiga) in submenu 1, and a C (for Commodore) in submenu 2. Give each an access level of zero for now. When you are through with this page, select the ACCEPT gadget.

Your menu is finished! Go up to the GENERATE menu option and look at the choices available.

"Use Old Text" is for when you have loaded an old menu and want to make changes to it, but want to keep the original text and/or graphics. You would use this if you had already constructed an elaborate menu of your own and wanted to alter the text section yourself.

"Controls Only" just generates the bare-bones control codes for Skyline itself to make this menu do what you want; it generates no text or graphics at all. You would use this option if you intended to physically construct your own text or graphics segment. Just use the AmigaDOS command "Join" to move your graphics onto the end of the output from this command (in long roll-your-own SkyPix files, remember to use the embedded command "@Z" to turn off paging, or you'll get a "Hit RETURN" request in the middle of your menu.)

"Plain Menu" generates an ASCII (text-only) non-graphic menu.

"ANSI text" generates a simple-but-attractive ANSI menu.

"SkyPix Menu" generates a SkyPix-compatible menu complete with gadget controls. Generating a SkyPix menu this way completely insulates the SYSOP from the gritty details of constructing SkyPix gadgets and is highly recommended, especially to people not familiar with SkyPix codes.

"All 3 Styles" generates all three of the above menu styles, one after another. Select this option now, since we want all 3 menus.

Defining ranges of areas

Menu Trees

You will see three file requesters appear, one after another, asking you to approve the names of the menus before saving them. Notice that the system already knows you want them in TXT.; and handles the ".ANS" and ".SKY" extensions automatically. Select OK for all three of these requesters. So that you can see what we're doing, log on locally to the BBS and examine the Main menu. Change your settings to all three styles in sequence so you can see what the standard menus look like and so you can try out the SkyPix gadgets. When finished playing around, stay online but go back to the compiler window.

Now let's construct a menu for the Amiga people. For the purposes of this demonstration, we will combine all their functions into a single menu. In real applications you would probably want to branch off to separate message and database menus.

Select the menu option "New Menu" to clear out all the old values. Name the menu "Amiga" and select the appropriate commands. Click ACCEPT and look at the other gadgets on the front screen.

Defining Ranges

Each sub-board can access a RANGE of contiguous message bases, databases, or text bases. You select the low and high areas for each section. For now let's give the Amiga folks message areas 2-10 (leaving area 1 open as a general-message "lounge" area). Assign them a low and high database and textbase area as well (although you may wish to assign the same range numbers for all these areas for clarity, there is no absolute need to). At this time, click on "MBaseAdvise" or "DBaseAdvise", to see what they do (you will normally leave these on; what they do is provide status messages such as which transfer protocol is in effect, etc.). They are highlighted when active.

Generate the menus, then return to the BBS screen and select the AMIGA menu from your main menu. If you included area-choice commands of some kind in your Amiga menu, try them and notice that areas outside your defined range have become invisible. This invisibility extends to ALL commands; for instance, attempting to download or list a file that exists in a non-accessible area will fail.

You should now be starting to get some ideas on how to set up your own system. For instance, you could put a selection called "Lounge" in your main menu that simply called a message-base type menu in which both the high and low areas were area 1 (this is how to define a menu with only one area; set the high and low to the same number). The possibilities are endless; use your imagination, and don't neglect the embedded commands (see Chapter 9).

The BBS commands

Menu Trees

There are two other menu options we should look at: ANSI colors and SkyPix colors. These control what colors are used in the generation process; experiment with them to find a setting you like. Keep in mind that, especially with SkyPix, you are not limited at all in terms of colors or menu design; these options just control the simple menus generated by the compiler. If you design your own menus, they can be made to differ radically from the "plain vanilla" menus produced by the compiler.

THE SKYLINE ONLINE COMMAND SET

GOODBYE - Logs the caller off, after showing the "LogOff" text file.

PREVIOUS MENU - Bounces back up to the next higher menu level. This is not very useful from a textfile.

REGISTRATION - Triggers the registration sequence. Shows the file "PreRegister", asks the questions, then shows "PostRegister". The NewMember defaults for flags, access, main menu number, and time limits take effect immediately after this command returns.

USER SETTINGS - Lets the user change his user profile. For a person with SYSOP access (255), allows them to change ANY user's profile, in more detail than allowed to users. For instance, you can change a person's flag settings in this way.

CHAT REQUEST - Pages the SYSOP. If it exists, this plays the BBS:CHATSAMPLE file. Does NOT automatically trigger CHAT mode itself. The SYSOP enters and exits CHAT mode by pressing the ESCAPE key.

HELP - Triggers the HELP file for that menu. All help files are named after the menu they are associated with, followed by ".hlp".

LIST USERS - Lists the userlog.

SKYDOORS - Goes to the SkyDoors area. Shows the file JumpMenu, asks for a choice, and attempts to run the program selected.

TEXT LIBRARY - Calls the text library. Shows the text areas, asks for a choice, then shows that area's TextDir file, asks for a filename, and loops until the user is through.

READ NEWSLETTER (TXT:Envir/Newsletter) - Shows the text file "Newsletter".

FEEDBACK TO SYSOP - Shows the file SysopComment, then goes to the message editor. Message is stored as a private message to SYSOP in whatever area

The BBS commands

Menu Trees

has been selected for this purpose (from the CONFIGURE window).

ENTER MESSAGE - Calls the message editor. The message will be stored in whatever area the user was in last. Keep in mind that this area may be automatically changed by the menu he's in.

NEW MAIL (GLOBAL) - Goes through all message bases (that are available from this menu) contained in the caller's Active Areas list, in order, showing the new messages in each.

NEW MAIL (AREA) - Shows all new mail in the user's currently-selected message area.

SEQUENTIAL - Allows sequential forward or reverse message reading, the direction being determined by the message numbers entered.

PERSONAL MAIL - Goes through ALL areas in the caller's Active Areas list (that are accessible from this menu) that have mail addressed to the caller. Reading messages in this way does NOT reset the High Message counter in that area.

CHANGE MB AREA - Allows the user to change message base areas. Shows a list if he wants it. Won't allow or even show areas outside the menu's limits.

SEARCH MAIL - Searches for strings in messages, in the header, body, or both. The key is CASE SENSITIVE. A common error by people who don't take the time to read instructions is to enter a name in lower case. Since all names in the headers are uppercase, this is doomed to failure.

DELETE MESSAGE - Kills a message. SYSOPs (access 255) and persons with SigOp flags set can kill any message; others can kill them only if they are TO or FROM them.

USERS IN SIG - Lists the users that are members of a particular SIG.

CONTINUOUS MESSAGES - Like Sequential, but shows a range of messages without pausing after each.

JOIN SIG - Add or drop a SIG from the Active Areas list. The SIG can then be selected from the Change Area command. Also see embedded command @J.

CHANGE DB AREA - Changes database areas. Shows a list of areas, if desired.

PROTOCOL - Lets the caller select his default protocol. This stays in effect from call

The BBS Commands

Menu Trees

to call until this item is selected again.

VIEW ARC - Shows the contents of an ARChived file set.

FIND FILE - Locates and shows specs on a file. Caller can enter filename, piece of a filename, piece of a description, or a file number. Doesn't work outside a menu's range or the caller's access level.

INFO FILE - Shows everything the system knows about a specific file.

UPLOAD - Begins the upload sequence using the selected protocol. The online clock is effectively stopped during uploads so that the caller is not penalized.

KILL FILE - Deletes a file from the listings. Does NOT erase it physically from the drive; instead, puts a dash "-" before the filename. Sysops and SigOps can delete any file; others can only delete files they have personally uploaded.

LIST FILES - Lists the files in an area, with descriptions.

NEW FILES - Shows new files uploaded either on or since the day of the user's last call (caller's choice), in the current area or all areas.

COMPLETE FILES - Does a complete dump of every accessible file in the database. Will not show files in locked-off areas or out of bounds of the settings in the current menu (NO database command will show or allow access to locked-off areas). Asks caller to hit RETURN after each page.

DOWNLOAD - Begins the download sequence, using the chosen protocol.

DROP TO DOS - If the user's GATE flag is active, this allows access to most of the CLI commands remotely. Be careful not to give this command to inexperienced people as they can easily lock the system up by not being careful.

LIST SHORT - Like LIST FILES, but doesn't print the descriptions.

NEW SHORT - Like NEW FILES, but doesn't print the descriptions.

COMPLETE CONTINUOUS - Like COMPLETE FILES, but doesn't do paging; just continuously prints a list of all accessible files, in all areas the user has access to in THIS menu. This is useful when a user wants to capture the list.

DOWNLOAD/LOGOFF - A handy option that does what it says; begins the

The BBS commands

download sequence, then if the download is successful, logs the caller off. This way the caller can start a download and leave, letting the system log him off. Of course the same effect can be obtained by stacking the commands for DOWNLOAD and LOGOFF. The difference is that doing it with this command WON'T log the caller off if the download fails.

MOVE FILE - Places the selected file in another database area, both in the listings and physically on the disk, if required.

Online features

ENVIRONMENT TEXT-FILES

Following is a list of all the environment text-files that are hardcoded into Skyline, with descriptions and suggestions for use. Note that these are all optional; if you don't need them you can simply not create them. All of the following, if they exist at all, must appear in "TXT:Envir" except where noted. Note that the embedded commands may be used freely in any of these files.

Text files are divided into directories as follows: the ".hlp" files are kept in TXT:HELP, all environment files are in TXT:ENVIR, all menus and special-purpose files are in TXT:, and the "TxtDir" file for each textbase is within that textbase's directory. Special purpose files that are triggered with a multiple-choice embedded command MAY be put into a subdirectory within TXT:, if the directory is specified in the command.

Detailed Listing of TXT:Envir/ files

<menuname>.hlp - where <menuname> is the name of a Skyline menu. This is a HELP-file that will be triggered by selecting HELP from a menu. The help-file is different for each menu. For instance, a menu named "AMIGA" would have a help file named "AMIGA.HLP".

TooSlow - seen immediately upon connection by users who call at a baud rate that is below your minimum baud rate. They are immediately disconnected after this file is viewed.

Welcome - the very first file seen when a caller connects at a valid baud rate. There is no point in creating a "Welcome.ans" or "Welcome.sky" file, as they will never be shown.

BadPassword - Seen when a caller enters the wrong password three times. They are then disconnected.

LowLife - Seen by anyone who does not have their ONLINE flag set. This is intended for users who are suspended but who are left in the userlog. The caller is then immediately disconnected.

Environment files

Online Features

MailWaiting - This file is shown to members who get the MAIL WAITING message in the logon sequence. The purpose of this file is to allow the SYSOP to insert embedded commands asking if the caller wants to read his mail now.

Member - Seen during the logon sequence by anyone who is registered on the system.

NonMember - Seen during the logon sequence by people who are NOT listed in the userlog. This file is very flexible; you can allow registration from it, explain the rules of your system, or tell callers that yours is a private board and disconnect them.

<User Name> - A file named by the member's name (including spaces). This is known as the URGENT textfile. It is used for important, individualized messages, or for hanging an individualized menu tree from.

LogOn - Seen by everyone as soon as name and password entry is completed. This is the logical place to put logon graphics.

AccessXXX - where "XXX" is an access level, as in "Access1", "Access255" etc. Seen during the logon sequence by people who have that access level. In addition to delivering messages, this is a possible place to hang a specialized menu tree.

MustRead - A file during the logon sequence that is seen by everyone, with no exceptions. It cannot be aborted.

BulletIn - A general-purpose text file seen during the logon sequence.

Logoff - The text file seen at logoff. If desired, embedded commands could be inserted to ask "Are you sure?", "Do you want to leave a comment for the SYSOP?", etc.

Newsletter - The file triggered by the "Read Newsletter" menu command, if used.

F7/F8/F9/F10 - Four text files that are triggered when the SYSOP hits the [F7], [F8], [F9], or [F10] function keys, respectively. Useful for injecting hints, warnings, special messages to troublemakers, etc.

SysopComment - Appears when a caller selects the "Comment to Sysop" menu command. The usual use for this would be to point out that the SYSOP cannot answer questions asked in the comment area. However, since it is perfectly possible to route these messages to an ordinary message base where a reply IS possible, the option to put something else in it or skip it entirely is available.

Environment files

Online Features

RatioExceeded - Seen when a member attempts to download more files in proportion to his uploads than his download ratio allows.

FileOffLine - Seen when a file is requested for downloading that is in the listings but not physically present in the database. You could use the Questionnaire embedded commands here to let the user request the file.

TextDir - There is one of these for each active text area. These are the ONLY files that are not located in the root TXT:, but are instead located in the numbered directory within TXT: relating to the appropriate text area. These contain a directory of the files available in each area. They are SYSOP-generated to allow customization.

JumpMenu - The listing of choices available from the SkyDoors command. SkyDoors are fully implemented and are covered later in the manual.

PreRegister - Seen when the registration command is triggered, BEFORE any questions are asked.

PostRegister - Seen AFTER the registration sequence is completed. It would be possible to insert extra questions, etc. at this point if needed.

PreDoor - Seen immediately before a SkyDoors AREXX program is executed.

PostDoor - Seen immediately upon return from a SkyDoors AREXX program.

HELP FILES

Every menu can have a help-file bound to it. These are called by the name <menu-name>.hlp. where, of course, <menu-name> is the menu name (without extension) with the extension ".hlp". The exception to this is the help file for the message editor, which must be named "MEditor.hlp". Access to help- files is enabled by setting the HELP flag on the command page in the menu compiler. All help-files must be stored within a directory called "TXT:Help". There are no special graphics versions of help files (i.e. .ANS or .SKY), though graphics can be put in them if desired. If you do this, however, ALL users will get the graphics whether they wanted them or not. Note that with embedded commands you could expand this into a help menu with submenus for different topics.

EMBEDDED COMMANDS

Embedded commands are the way to release the real power of Skyline..

Help files
Embedded commands

Online Features

Used in conjunction with menus or in ordinary text files, they allow you to interact with the caller in a number of productive ways, even automatically altering his user record, if desired. For the most part, the actions will be easy to understand, but the possible uses might not sink in for a while. In the explanations below, many examples are given to demonstrate a variety of possible applications.

Don't confuse these with SkyPix commands. SkyPix commands all start like an ANSI sequence: an ESCAPE character (ASCII value 27) followed by a left bracket ([). They can be intermixed with SKYLINE embedded commands without problems. An editor like EMACS that can easily insert escape characters into the text is recommended for dealing with files containing SkyPix. Embedded commands in Skyline are, for ease of text editing, simply introduced by the "@" character. They are followed by a command code (usually one character, but sometimes two) and sometimes a parameter. In most cases no spaces appear between commands and parameters. In the descriptions below, many examples will be given for ways to use each command. Think of them in the same way you'd think of escape sequences within a word processor; they are a cue to the program to perform some function. The action is taken, then control is returned to the rest of the file.

LIST OF EMBEDDED COMMANDS AVAILABLE

@A - Alter a user's settings. This is followed by a number from 1 to 11 as listed below, a space, and a parameter. Unlike some commands, all @A commands need to be on a line of their own. @A changes part of a user's profile permanently. This can be of great assistance in automatically routing new users to desired areas with desired abilities.

The possible alterations are:

- @A1 CITY - Insert CITY (for example) in the user's City selection.
- @A2 STRING - Puts STRING in record of response to ExtraQuestion1.
- @A3 STRING - Puts STRING in record of response to ExtraQuestion2.
- @A4 STRING - Puts STRING in record of response to ExtraQuestion3.
- @A5 STRING - Puts STRING in Sysop Comment area.

The above four options could come in very handy for keeping some important, changeable data in a user's record. You are basically using these areas to store strings of information as variables, which can be altered according to what file is being read, which in turn can be selected by the caller in various ways. You can for instance activate only ExtraQuestion1 in the Registration sequence, leaving the other two unused to be filled from a file in this way. A possible use for this would be to see that all new callers read a certain file containing your system's rules. For instance, if you put the line

Embedded commands - listing

Online Features

@A5 Has read rules

somewhere in the "rules" file, and all callers who have read the rules will have this notation in their Sysop Comment.

@A6 NUMBER - Changes caller's Main Menu Number (see MENUS) to NUMBER. Should be used BEFORE the main menu is reached, or won't take effect until the next call. Possible uses: Use a multiple-choice question (see below) to select a file relating to the computer a person owns. In that file, change his menu number to a Main Menu that has been set up for that type of computer.

@A7 NUMBER - Changes a user's Flags variable to the combination of flags represented by this number. Currently, the best way to arrive at this number is to change a test entry's flags to the way you want them with "Interact", then log on as SYSOP and look at the dummy user's record from online with the "Change Settings" command. (Alternately, you can add the fields together yourself; they're listed in the AREXX section.) The number following the Flags item is the number to put here.

@A8 NUMBER - where NUMBER is a new access level.

@A9 NUMBER - where NUMBER is a new time limit.

@A10 NUMBER - where NUMBER is a new daily limit.

@A11 NUMBER - where NUMBER is a new download ratio.

@O - Opens a file for writing results. Follow this immediately with the pathname of the file you want to create or add to. An example would be '@OBBS:Answers'. This command needs to be on a line of its own. It also puts the caller's name and the date and time in the file automatically. DO NOT open more than one file at a time! Every file opened must be CLOSED with the @C command, below.

@I - Followed by either 1 or 0. This allows you to choose whether the current file can be interrupted with hotkeys. If followed by a 0, the file is interruptable; if 1, it isn't.

@N - Inserts the user's full capitalized name at that point.

@F - Inserts the user's first name, with only the first letter capitalized.

@Q - Gets a reply from a caller and stores it in the file opened by @O.
Example: "What's your favorite gastropod, @F? @Q". Replies can be up to 70 characters long.

Online Features

@R - Prompts the user to "Hit RETURN to continue".

@Z - Supresses the "Hit RETURN" prompt that automatically happens on every page.

@P - Pauses about a second. More exact control is available for Skypix users from the Skypix pause command.

@C Closes an open file. Always close the files you open, or you're courting disaster.

@U - Displays various elements of the caller's record. U is followed immediately with a digit from 1 to 9, which produce the following results:

@U1 - Total calls

@U2 - Total uploads

@U3 - Total downloads

@U4 - Extra Question 1 answer

@U5 - Extra Question 2 answer

@U6 - Extra Question 3 answer

@U7 - Upload-download ratio

@U8 - (Not presently used)

@U9 - User's transfer protocol

@B DIRNAME - Gets a response from a user, then uses that response as a filename contained within TXT:DIRNAME. It then displays that file. DIRNAME is a directory within the TXT: area. For security reasons you can NOT use a file in the main TXT: directory. With this command you could duplicate the function of the textbase, have textbases within textbases, use the "filename" as a secret password to trigger a file with other embedded commands, create adventure games, etc.

@J(number) - Attempts to "inject" the caller into the SIG specified by (number). This can be used in conjunction with multiple-choice commands and record-altering commands to obviate the need for Join Sig commands in the menus. Note that this command TOGGLES the caller's membership in a SIG; if he's already a member, this DROPS him from the SIG. If he already has 20 areas specified in his "Active Areas" list, the command will FAIL, an error message will be displayed, and the file will be aborted. @J is a powerful command but its power means it needs to be used carefully. It is safest to use it somewhere when you KNOW the caller has plenty of room in his list, such as during registration on his first call.

@X(number) - Executes a BBS command immediately. Commands are numbered for this purpose (see list below). No spaces are allowed. For instance, inserting "@X0" in a file will instantly log the caller off.

Embedded commands - listing

Online Features

Here is a list of the commands and their codes. Descriptions of the commands themselves appear in the Menu Trees chapter.

@X0 GOODBYE
@X1 PREVIOUS MENU
@X2 JOIN
@X3 SETTINGS
@X4 CHAT
@X5 HELP
@X6 LIST USERS
@X7 ELSEWHERE
@X8 TEXT LIBRARY
@X9 READ NEWSLETTER
@X10 FEEDBACK TO SYSOP
@X11 ENTER MESSAGE
@X12 NEW MAIL (GLOBAL)
@X13 NEW MAIL (AREA)
@X14 SEQUENTIAL
@X15 PERSONAL MAIL
@X16 CHANGE MB AREA
@X17 SEARCH MAIL
@X18 DELETE MESSAGE
@X19 USERS IN SIG
@X20 CONTINUOUS MESSAGES
@X21 JOIN SIG
@X22 CHANGE DB AREA
@X23 PROTOCOL
@X24 VIEW ARC
@X25 FIND FILE
@X26 INFO FILE
@X27 UPLOAD
@X28 KILL FILE
@X29 LIST FILES
@X30 NEW FILES
@X31 COMPLETE FILES
@X32 DOWNLOAD
@X33 DROP TO DOS
@X34 LIST SHORT
@X35 NEW SHORT
@X36 COMPLETE CONTINUOUS
@X37 DOWNLOAD/LOGOFF
@X38 MOVE FILE

Embedded codes for BBS
commands

Online Features

@X39 MENU 1
@X40 MENU 2
@X41 MENU 3
@X42 MENU 4
@X43 MENU 5
@X44 MENU 6
@X45 MENU 7
@X46 MENU 8
@X47 MENU 9
@X48 MENU 10

NOTE: the list of available commands is subject to being enlarged at any time.

@S1 - @S9 - Choices for multiple choice questions. Followed immediately (no spaces) with a filename. See @W below. These can be used in questionnaires as well as menu choices.

@W - Gets a yes/no or 1-9 response from the caller, then calls a file specified by the @S commands ("Y" is interpreted as 1, "N" as 2). If no action is to be taken, specify a nonexistent filename such as NULL.

@Vmenuname - Calls a menu (as opposed to a textfile). The only difference in function between a "menu" and a "textfile" is that a menu will act on a command or, if none are in the queue, ask for one. It will then loop until Previous Menu is chosen. Both treat ALL the embedded commands (and SkyPix) identically.

@Yx path - Starts an AREXX macro. Unlike SkyDoors macros, these can be anywhere; give a full path. The x is a 0 or a 1; 0 for an asynchronous program that you want to keep running while the board continues, or 1 for a synchronous command that will wait - like the SkyDoors program - for the "SHUTDOWN" command before the BBS is allowed to restart. (See the section on AREXX interfacing for more details.)

@M - THE MENU CONTROL COMMANDS

There are several commands that begin with "@M". These control the actual menu paths, active commands, etc. These are all generated by the menu compiler.

@MC(list) - Lists the commands which are valid from this menu and assigns letters to them. Let the compiler do this for you.

@M0-@M9 - Submenu names. The compiler will generate control codes to call the

Embedded commands - listing
Menu control commands

Online Features

actual menus; these are the names of the menus themselves. The names of the menus show up as part of the Command prompt, as in "Main Command >". This is followed on the next line by the ACCESS LEVEL required to use that menu. Example:

@M0Messages
0

Means that submenu 1 is called Messages, and the second zero means that anyone with access 0 can get there. NOTE: Menu names must NOT have spaces in them.

@MA - Inserts an advisory statement about message bases. You would insert this in a menu intended as a message base menu. For example:

Area 1: GENERAL MESSAGES
High message is #345; you have read through #100

@MB - Inserts an advisory statement about databases, similar to @MA.

You should use these in menus where appropriate; for instance, in a menu that contains a "Change Message Base Area" option, you should always let the caller know what area they're in. You can of course use other embedded commands for data display to add to the information available in a menu.

@MEnumber - Access-level check. Used to abort the text (OR INSTRUCTIONS, or any embedded commands) following it below a certain access level. Useful for blocking off parts of menus from lower access levels. To turn the menu text back on, use the same code with "number" set to zero.

If you do this yourself, put the "@ME0" just before the start of whatever graphics rendering your menu does AFTER displaying the options; for instance, a bottom border, or the box around the Compiler-generated SkyPix menus.

@MF1 - Forces a range of message base areas. For instance, @MF1 10 20 means that from this menu, only message bases in the range 10 to 20 will be available. This and the following two commands are what make splitting the system into isolated sub-boards possible. These commands also do something important: they MOVE the user into the first available area. In the case of message bases, the first SIG that the caller is a MEMBER of will be where he is placed.

For instance, if the Atari message bases range from 30 to 40, and the user is a member of SIGS 34, 35 and 36, when this menu is encountered he will be placed in SIG 34.

Menu control commands

Online Features

It is important to note that if he isn't already a member of ANY of these SIGs, the menu change attempt will FAIL, telling the user why, and return him to the previous menu. For this reason it is important to have a Join Sig command somewhere in the menus BEFORE entering the restricted menu. You don't have to insert it as a menu option if you don't want to; you can execute it from the "NewUser" file (after registration) and have users choose SIGS at that time. Note that doing this forever restricts the caller to the areas chosen on that first call, so having the option in the menu is still a good idea. Alternately, you can use the "@J" command mentioned above to "inject" the SIG into the caller's "Active Areas" list.

@MF2 - Forces a range of database areas. See "@MF1" above. Note that any database commands in this menu will only access files in this range.

@MF3 - Same as "@MF1" and "@MF2" except that it forces a range of text areas.

The above "@MF" commands allow the SYSOP to logically split the board into independent BBSs that have no point of contact at all except in the menu that allows choices between them. for instance, by automatically calling one of these sub-boards from the "AccessXXX" textfile, you could force entry into one or another sub-board, thereby making the boards completely isolated. Every different access level could have a different range of message areas and text areas, and (of course) different menu structures.

@MZ - tells the system two things: that this is the end of the menu controls, and that this is the point to abort and send an "Expert Menu" if the member is in Expert mode. The system assembles a one-line Expert Menu from the commands you have specified for that menu. It also accepts a [?] which shows the user the full menu. EVERY MENU MUST HAVE THIS COMMAND IN IT just before the text/graphics portion.

EXAMPLES OF EMBEDDED COMMANDS

Here's an example to allow a new file list at log-on. These are actual files taken from a working system. Since this is triggered from the MEMBER file, nonmembers do not see this.

File MEMBER:

```
@S1choices/seenewfiles
@S2null
List new database files (Y/N)? @W
```

Menu control commands

Embedded commands - example

Online Features

If the user answers YES, the file "TXT:Choices/SeeNewFiles" is called. NULL is a dummy (nonexistent) file, although you could use a real one if desired. Note that you can specify your own subdirectory within TXT: for your "choice files". This is highly recommended to keep from cluttering the root of TXT:. We arbitrarily created a subdirectory called CHOICES; you can call it anything you like.

File SEENEWFILES:

@X30

@S1choices/wantdb

@S2null Do you want a database menu now (Y/N)? @W

This executes command 30 ("See New Files"), and if they want a database menu, calls the file "TXT:Choices/WantDB".

File WANTDB:

@VDBChoice

This short file simply invokes the menu DBChoice, which can be a standard database menu. Note that it doesn't have to be the same database menu used anywhere else in the system; it can be a totally different menu. An alternative to the above could have been to ask if they want to download a file, and if so, use @X to execute the download command. Or this: Declare this last file "WantDB" a menu by calling it with @V, and have only two commands in it: "Y" to trigger a download, and "N" to quit the menu. Then the visible portion of the "menu" could simply be:

Download a file (Y/N)?

Since this is really a MENU instead of an embedded multiple-choice question, it will LOOP until the caller is through downloading and answers NO. Then it falls back upstairs, a layer at a time.

This last idea is important to understand. Since these menus and files are all NESTED, they fall back upwards a layer at a time to finish the previous menu, just like any other text file with an embedded command. It would be possible to have other statements, etc. in those half-finished higher level menus that are executed AFTER these commands return. It would even be possible to stick in new menu definition commands, etc. at that point. There are a multitude of features that can be implemented by thoughtful use of these commands.

You might find it interesting that GOODBYE is internally only a special form of

Embedded commands - example

Online Features

Previous Menu. It opens all the higher menus' "trapdoors" at once and falls upstairs through ALL of them. This is why you can put GOODBYE in any menu and expect it to work.

There are a number of convenient little tricks one can do by imaginative use of embedded commands. A clever SYSOP could get very tricky with the multiple choice commands, the built-in textbase, and the little "miniature textbase" command, "@B", combined with other delimiting features in the rest of the system, such as the "@J" command and the ones for altering a user record.

This arrangement allows a very wide latitude for customizing your own system. If you want the registration sequence to be chosen automatically for new users, put the appropriate commands in the NonMember file. If you want the system to ask "Are you sure?" before it logs you off, this is easily done with the multiple-choice command, "@S".

THE COMMAND PARSER

Command Stacking

Commands can be stacked to any level, with or without spaces. The stack is executed in order, changing menus when necessary. If a command is encountered that makes no sense at the menu it finds itself at, it is skipped with a warning message and the rest of the stack is discarded. Include any numeric parameters required. Numeric parameters need to be separated with spaces. It's possible to perform an entire logon sequence with one command entered at the first prompt. This greatly simplifies the writing of terminal script files, etc.

MESSAGE EDITOR

The message editor is the function that allows you to send or reply to messages. It allows you to enter up to 40 lines of text or 3200 characters (whichever occurs first), after first prompting the user to hit [B] for BLOCK mode or [RETURN] for normal entry (remember that **there is also [F] to let the SYSOP convert files to messages**). Block mode can be used to send ASCII, ANSI, or SkyPix files as messages. Messages are entered continuously, allowing the system to perform word-wrapping, and using RETURN only for paragraphs. You should emphasize this to your users; it is very annoying to people with full 80-column screens to read messages that have been forced to 40 columns by people hitting [RETURN] after each line (Skyline does not directly support screen widths of under 80 characters; the responsibility for word-wrapping and proper formatting for these callers lies with their terminal programs. If you really want to, you can format menus and text files that 40-column users see to 40 columns). Once the message is entered, several options are

Command parser

Message editor

Online Features

available:

[E]dit lets you enter a string and replace a wrong phrase. This doesn't mean you have to re-enter the line; if only one word is wrong, only one word needs to be changed.

[L]ist shows the message again.

[Q]uit throws the message away.

[R]estart keeps the address information but lets you begin entering the body of the text again.

[C]ontinue lets the sender resume entering text on the next line.

[S]ave saves the message as public mail, and [P]rivate save means only the sender and the addressee can read it (and anyone with SIGOP or SYSOP access). In an EMAIL area, [S] and [P] both save privately.

MESSAGE FORMAT

Several items appear in the headers of messages:

The area it is in

If the Message is PRIVATE, it is so noted

Retrieval Mode (usually NORMAL)

The Message number

The day, date, and time the message was sent

Whether or not it has been received by the addressee

Who the Message is FROM

Who the Message is TO

The SUBJECT of the message

Whether it is a REPLY to another message, and

Whether or not the message has replies

While reading messages, pressing N will skip the rest of the message.

At the end of each message several options are presented. [A]gain prints the message again, [N]ext goes on to the next message (pressing [RETURN] does the same), [Q]uit aborts the message reading procedure, and [R]eply gives you a chance to enter a response to the message (see THE MESSAGE EDITOR below). If the message is a reply to another message or has replies, other options appear:

The message editor
A sample message

Online Features

[T]raceback, which shows you the original message, if it still exists; [S]ee replies takes you to any replies; and [F]ollow thread will take you from message to message within the message thread - that is, from the first message through each FIRST reply to the most recent.

SCREEN CLEARING

Skyline automatically clears the user's screen at certain points. Callers specify their clear-screen character when they join. However, this can be disabled on an individual basis by simply changing the user's clear-screen character to a carriage return (13).

FUNCTION KEYS

The function keys have special uses, as listed below:

- F1 raises the caller's access level by 1.
- F2 lowers the caller's access level by 1.
- F3 adds 5 minutes - temporarily - to the user's time limit on THIS call.
- F4 lowers user's time limit 5 minutes, temporarily.
- F5 raises the user's daily limit 10 minutes, permanently.
- F6 lowers the user's daily time limit 10 minutes, permanently.
- F7 through F10 send textfiles labeled TXT:Envir/F7 through TXT:Envir/F10.

CHAT MODE

Chat mode can be initiated at most times during logon by pressing the ESC key. It will even work in most SkyDoors programs. It will NOT work during message entry or a file transfer. When in chat mode, you can type directly to the user and he can respond in a conversation-like way. Exit CHAT by hitting ESCAPE again.

Chat has one interesting feature for busy sysops. Often, people requesting a chat can take an inordinate amount of time composing their half of the conversation. Hitting the HELP key during these CHATS will cause all screens to flash when the remote user hits RETURN. This allows the SYSOP to continue doing something else in another screen until the screen flash signals that the chatter has finally finished. This mode resets itself after each CHAT.

Interrupting a caller for a CHAT during the rendering of a graphics screen can result in a lot of garbage. While it will work, it's best to break into CHAT when things are relatively quiet.

Offline features

THE UTILITY WINDOWS

While Skyline is running, three utilities are available from the Intuition menus at the top of the screen; selecting these will toggle the associated utility. You should already be familiar with the Configure program, now we will look at the other two. These programs that can run simultaneously with Skyline and can share its display. The programs are mutually exclusive; only one can run at a time. INTERACT is the only program that should be run while a caller is online. The option to run the other utilities on-line is there for those who are familiar with the file calls and can time their requests around them, but this is not recommended; the board should be "made busy" via software or hardware when the other programs are being used. Selecting another of these utilities while one is active will first close the old window.

When any of these three programs are running, the screen goes into interlace mode to allow the BBS monitor window to have a full display. Display graphics, and even SkyPix graphics, will still work correctly in this screen. It should also be pointed out that these utilities ARE on their own screen - while they are active (not just running, but ACTIVE), you will not be able to enter text in the BBS window (including the keyboard shortcuts for toggling these utilities) until you re-activate the BBS window with a left mouse-button click inside it.

INTERACT

This program serves two purposes. When first activated, it is a window into a caller's user parameters. All of a caller's important log settings can be changed in real time, while the caller is on-line. They become active immediately, but ARE NOT SAVED until the user disconnects. All of the "string gadgets" except two will be familiar to Atredes 1.0 users; those two are PROTOCOL and MENU PATH. "Protocol" is a number from one to four, indicating the member's default file-transfer protocol. 1 is XMODEM, 2 is XMODEM-1K, 3 is YMODEM, and 4 is ZMODEM. "Menu Path" is explained in the section on menus; for now, suffice it to say that entering 1 means the member gets MAIN1 as his main menu, 2 is for MAIN2, etc. up to a maximum of 256 (Main0 through Main255 can be used).

The utility windows
The INTERACT window

Offline Features

SGOP - User has SigOP privileges. This replaces the old system of giving access levels 250-254 SigOP access. A user who has this flag set can read ALL messages and see ALL files, and can respond to and delete any message or file. They CANNOT alter the userlog unless their access level is 255.

GATE - Short for DOS Gate. Users with this flag set can use the "Drop To DOS" command to execute most CLI commands on the host computer.

LNFD - Linefeeds.

ANSI - ANSI graphics enabled.

SKYP - SkyPix graphics enabled.

XPRT - "Expert" mode. It works exactly like the expert mode in V1.0, that is, a line of the menu key assignments is displayed instead of the menu. Entering a question mark displays the normal menu.

PRVT - User is allowed to send private mail.

ONLYN - Caller is allowed to get on the system in the first place. If this flag isn't set, they get the "LOWLIFE" textfile and are immediately disconnected after entering their name and password. Caution: if you neglect to set your "NonMember" flags (from the Configure program) this will happen to every new caller.

INTERACT has Intuition menus of its own. By selecting "Maintenance" from the MODE menu, four new gadgets ("Save", "Next", "Drop", and "Quit") appear near the lower-right corner, and the program becomes the replacement for the old Atredes SYSOP program (which, by the way, YOU MUST NEVER USE AGAIN! It is incompatible with Skyline 1.2 and will cause major problems if you attempt to use it). The keyboard shortcut for "Maintenance" is [right-Amiga]+[M]; the shortcut for "Interactive" is [right-Amiga]+[I] - remember that the INTERACT Window must be active for these to work.

Interact will automatically change to reflect the current caller's statistics when in Interactive mode. When in Maintenance mode, it is a general-purpose userlog upkeep utility.

Interact has several options when in maintenance mode:

FIND/EDIT - accepts a string and searches the userlog for occurrences of it. Note

INTERACT window options

Offline Features

something very important: it searches ALL the strings in the user entry, not just the name. This makes it possible to, for instance, search for everyone from Akron. Or combine this capability with the embedded commands that alter portions of a user's record, and it becomes a way to sort by any key(s) YOU choose, using any number of keys. For instance, let's say that during your logon and registration sequence you ask the caller what kind of computer he has. You use the embedded commands to call an appropriate file, which among other things puts the word AMIGA in the user's Comment line. This all happens invisibly and automatically. Now at a later date if you want to see all the Amiga users, just enter the search key AMIGA. The keyboard shortcut for "Find/Edit" is [right-Amiga]+[F].

ADD NEW - does just what you think it would; it adds new users. The cursor will automatically move around the screen to the most vital entries. Remember to set the user's flags, access, main menu, and time limits.

VALIDATE - is for use by Sysops who don't allow automatic access to their board, but instead check identities and such before granting further access. This option cycles through all users with an access level of zero to allow individual processing. Note that for this option to work, NewMemberAccess must be set to 0 (in the CONFIGURE window). The keyboard shortcut for "Validate" is [right-Amiga]+[V].

DELETE INACTIVE - drops all users who haven't called in a certain number of days. This can work in "batch" mode, or name-by-name.

PRINT REPORT - generates an ASCII file consisting of your userlog with all important information. You can choose to send it to a file, or to your printer by entering PRT: at the requester.

DATABASE UPKEEP

There are four menu selections in the "DataBase Upkeep Window":

ADD LISTING - adds a new listing to the database by hand. This can also be done automatically (see "ADOPT ORPHANS" below). The keyboard shortcut for "Add Listing" is [right-Amiga]+[A].

EDIT LISTING - allows the editing of an existing file listing. It will pop up a string gadget for the search name. The keyboard shortcut for "Edit Listing" is [right-Amiga]+[E].

ADOPT ORPHANS - will search a given database for files not already listed. A string gadget will pop up for the database number (digits only) to be entered into. The keyboard shortcut for "Adopt Orphans" is [right-Amiga]+[O].

The **INTERACT** window
The **DBUpkeep** window

Offline Features

PURGE DATABASE - deletes items that are in the listings but are not physically present on the drive. You can do these all at once ("automatic"), or one by one ("prompt"). These are sub-menu choices with no keyboard shortcuts.

There are several improvements from the old database upkeep method. Filesizes are found automatically in edits and adds, and you can use "Adopt Orphans" to batch-process all the unlisted files in a directory. Select this option, give it a database number (1, 2, etc.) in the string gadget, then simply enter a description for each file that appears. The default uploader is "SYSOP", but this can be changed, of course. If you select the "DELETE" gadget for an "orphan" file, it will pop up a requester asking whether you want to delete the file itself from the drive.

The items in the file windows should be self-explanatory, except for ADDRESSED TO. This is for use in conjunction with the privately-addressed databases. If the file is not intended to go to only one person, leave this blank.

CONFIGURE

The Configure window is where the basic "skeleton" of your system is assembled. It is fully explained in the "Installation" chapter.

AUTOMATIC MESSAGE BASE UPKEEP

The system takes time out once each day to run through the message areas and clean each one out according to the settings in its Configuration Control Page (see the CONFIGURE section). This action is completely automatic and generally lasts less than a minute. The board is automatically placed online again when the procedure is finished.

THE BATCH FILES

Skyline has two "batch" files that are run automatically. (A "batch" file is simply a list of CLI commands. An example is S:Startup-sequence. See an AmigaDOS manual for more details, under the command EXECUTE.)

The first batch file is called SkyBatch; it is run after every call. Put the command FLUSH, FLUSHLIBS or SWEEP in this file (available on your Skyline disk). You may also put anything else in here you like. Many of the utilities available for Skyline take advantage of the batch files to do their work.

The other batch file is called SkyDaily. This is run once a day immediately after the message base upkeep routine. It too may be used any way you like. If you don't need

MBase Upkeep
The automatic batch files

Offline Features

these capabilities, simply create empty files. Both of the batch files must reside in your S: assignment.

INTUITION MENU OPTIONS

There are several other new options in the Intuition menus for Skyline (see the "Skyline Menus" section for a detailed description of ALL the menu entries:

Control - "Quiet Mode": For SYSOPS who use a lot of SkyPix and also use their computer for other things while the BBS is running. This pushes all BBS screens to the back and keeps them there. It also disables the audible CHAT sample. The screen will still flash to indicate a chat request.

Terminal - Protocol: The terminal now supports XModem, YModem, and ZModem. Ymodem Batch can upload the entire contents of a directory if the filename isn't specified. Zmodem downloads appear wherever you have assigned TMP:.

Display Modes

The top three items do just what they say; give you displays of full-screen or half-screen 80 X 25, or interlaced 80 X 50.

Control - Iconify: This option closes down the Skyline screen and windows leaving the BBS running. All that is left is a tiny gadget in the title bar of the Workbench screen labeled "BBS" (it appears slightly to the left of the depth gadgets). Clicking this gadget brings back the standard screen. Currently, you should use this gadget only when you can see by your modem lights that things are quiet, as your request may not be registered otherwise.

SKYLINE INTUITION MENUS

The following description covers the Intuition menus (those accessed by the right mouse-button) available on the main Skyline screen. They are covered in the order in which they appear, from left to right. This is just a listing; in most cases, there is more detail given elsewhere in the documentation.

PARAMETERS MENU

The Intuition menu items

Offline Features

BAUD RATE - a means of both checking and setting the current setting of the baud rate for **TERMINAL MODE**. When selected, a sub-menu appears with the standard baud rates, ranging from 300 to 9600 baud. When this sub-menu first appears, the default setting is check-marked; under normal circumstances, this would not be changed.

QUIT - does the obvious, but has no effect while a user is on-line.

CONTROL MENU

COLORS - pops up a palette-setting gadget that sets the screen colors. There is currently no way to save the changed palette. The keyboard shortcut is [right-Amiga]+[C].

QUIET MODE - keeps the **SKYLINE** screen from "popping" to the front when SkyPix graphics are transmitted; also keeps the "ChatSample" from being played back when a **CHAT** is requested (the **Display_Beep** flash is still enabled). This is most useful when multitasking with another screen to the front. The keyboard shortcut is [right-Amiga]+[Q].

BBS MODE - toggles between **BBS** and **TERMINAL** mode (when the "BBS" mode is **DISABLED**, the "Terminal" mode is **ENABLED**, and vice-versa). When the **PhoneBook** is activated, the **BBS** is automatically disabled. In this case, his menu item is used to toggle the **BBS** back on again. The keyboard shortcut is [right-Amiga]+[M].

DROP CARRIER - this will log a user off quite abruptly, but may not take effect under certain circumstances, such as during file transfers or chat mode. It also works locally (for testing, etc.). This menu item is presented as a sub-menu to reduce the chances of an accidental log-off. The keyboard shortcut is [right-Amiga]+[X].

LOCAL LOGON - allows local access to the **BBS**. In this mode, some of the items in the "Terminal" menu (such as "Capture Buffer" can also be used. The keyboard shortcut is [right-Amiga]+[L].

TERMINAL MENU

One of the major improvements in **Skyline** over **Atredes1.0** is a greatly enhanced terminal mode. The new terminal in **V1.1** has a number of new features, some of which are usable (and useful) while in **BBS** mode. We shall discuss each entry as it appears in the **TERMINAL** menu.

The Intuition menu items
The built-in terminal

Offline Features

PROTOCOL - this menu selection provides a sub-menu listing the three major file-transfer protocols: XMODEM, YMODEM, and ZMODEM. Selecting one of these places a check-mark next to its respective menu listing. Each also has a keyboard shortcut. This is enabled by holding down the right-Amiga key and pressing the [1] (for XModem), [2] (for YModem), or [3] (for ZModem) keys.

DOWNLOAD - select this after initiating a download from the system being called. A file requester will appear. Enter a path and filename for the file to be received in the appropriate string gadgets and press [RETURN] or click on the "OK" gadget to start the download. The keyboard shortcut is [right-Amiga]+[D].

UPLOAD - select this after initiating an upload to the system being called. A file requester will appear. Enter a path and filename for the file to be transmitted in the appropriate string gadgets and press [RETURN] or click on the "OK" gadget to start the upload. The keyboard shortcut is [right-Amiga]+[U].

CAPTURE BUFFER - captures and sends the terminal (or BBS) text-stream to a file called "BBS:Capture". If this file does not exist, it is created. If BBS:Capture already exists, the new file is appended to (tacked on to the end of) the existing file. This is also useful in BBS mode; the SysOp can log on, turn the Capture Buffer on, do a global read of new messages, check for new files, etc. then log off and read the captured text at his or her leisure. Combined with the ability to compose messages off-line for later uploading to the message base with the [F] entry mode (see the "Message Editor" section), it provides the Sysop with the ability to perform many of the normal board-maintenance functions without tying up the board for long periods of time. The keyboard shortcut is [right-Amiga]+[B].

PHONEBOOK - The system NAME appears at the left side of the phonebook window, the system PHONE NUMBER appears at the right side of the window. What is not immediately obvious is that the name gadget and the phone number gadget for each entry are separate - you must click each one separately to enter data for each system. At the bottom of the window are four gadgets - "SAVE", which saves an edited phonebook; "CANCEL", which closes the phonebook with no action taken; "PREFIX", a string gadget which sets the modem-string prefix for the dial-out ("ATTD" or "ATDT" for tone dial, "ATPD" or "ATDP" for pulse dial); and "PASSWORD", a string gadget in which you can enter a password for each system entered (to be transmitted by the next "Terminal" menu item "Send Password"- the gadget is activated for a given entry by clicking in the name or the number gadget for that entry). There is a "GO" gadget for each entry along the left edge of the window - click on the corresponding one to initiate a call out. Opening the PhoneBook automatically disables BBS mode, which enables TERMINAL mode (also see "BBS Mode" in the "Control" menu). The keyboard shortcut is [right-Amiga]+[T].

The Phonebook

The WINDOWS menu

Offline Features

SEND PASSWORD - sends the password for the system being called (as set in the PhoneBook "PASSWORD" string gadget). The keyboard shortcut is [right-Amiga]+[.].

CHAT BUFFER - places a one-line text box at the top of the screen to separate CHAT text from the main screen. The keyboard shortcut is [right-Amiga]+[-].

ASCII TRANSMIT - in terminal mode, this allows transfer of ASCII (text) files. This can include transmission of ANSI or SkyPix files to another Skyline system message base. When selected, a file requester will appear. Enter a path and filename for the file to be transmitted in the appropriate string gadgets and press [RETURN] or click on the "OK" gadget to start the transfer. The keyboard shortcut is [right-Amiga]+[A].

WINDOWS MENU

The following menu items are mutually exclusive; that is, when one of these utilities is invoked, any other window opened from this menu is closed first. The BBS screen is shifted to interlace mode and the display takes up the top half of the screen, with the open utility window on its own screen in the bottom half of the display. When a user is on-line, only the INTERACT window should be open. For the others, the board should be "busied out" (the phone line made busy, either through software or hardware). Together, the INTERACT and DATABASE UPKEEP windows replace the "SYSOP" program from Atredes 1.0.

INTERACT / LOG - toggles the INTERACT window, which allows either an INTERACTIVE mode with an on-line user, or a MAINTENANCE mode which allows UserLog modification. The keyboard shortcut is [right-Amiga]+[O].

CONFIGURATION - toggles the CONFIGURATION window, used to change settings for the modem string, global user flags, etc. The keyboard shortcut is [right-Amiga]+[S].

DBASE UPKEEP - toggles the DATABASE UPKEEP window, used to modify or add entries to the DataBase. The keyboard shortcut is [right-Amiga]+[P].

DISPLAY MENU

FULLSCREEN 80 x 25 - the "normal" (default) screen mode of Skyline - the same as the default WorkBench screen. Actually provides about 24 lines of text.

HALFSCREEN 80 x 25 - shifts to interlace mode, then compresses the Skyline display to the top half of the screen. This is

The Intuition menu items

Offline Features

similar to what happens when one of the utility windows is opened. Actually provides about 24 lines of text.

FULLSCREEN 80 x 50 - shifts to interlace mode, but allows the full screen to be used for text (about 48 lines).

ICONIFY - this option closes down the Skyline screen and windows, leaving the BBS running. All that is left is a tiny gadget in the title bar of the WorkBench screen labeled "BBS" (it appears slightly to the left of the depth gadgets). Clicking this gadget brings back the standard screen. Currently, you should use this gadget only when you can see by your modem lights that things are quiet, as your request may not be registered otherwise.

The Skypix Protocol

SKYPIX DEFINITION as of Oct. 1, 1989

This is the official definition of the SkyPix GRAPHICS PROTOCOL as of October 1, 1989. The SkyPix protocol itself is Copyright (c) 1988 Michael Cox - all rights are reserved. No adaptations, additions, deletions or changes to this definition are allowed for obvious compatibility reasons. The name "SkyPix" and the protocol itself are the property of Michael Cox and may only be used by persons who obtain written permission to do so from Michael Cox. Free licenses are available to non-commercial implementations.

GENERAL

SkyPix is a superset of the ANSI graphics standard. That is, all the graphics, color, screen and line clears, cursor movement, etc. function as they would in an ordinary ANSI emulation. The exception to this is that the graphics reset command, <ESC>[0m, also resets any selected fonts to the default, turns the cursor back on (SkyPix commands turn it off), and sets all colors and display modes back to the defaults.

An ordinary ANSI command is terminated with a letter, usually a lower-case "m". All SkyPix commands end with an exclamation point (!). This allows an ordinary ANSI parser to discard nearly all of the SkyPix commands cleanly if it isn't equipped to handle them. It also makes SkyPix very easy to install in any terminal that already has an ANSI parser built into it.

Most SkyPix commands have the form

<ESC>[cmd;p1;p2;p3!

where <ESC> represents the escape character (ASCII 27), "cmd" is the number of the intended SkyPix command, p1 through p3 represent a widely variable number of parameters, and the exclamation point ends the command. ALL SkyPix NUMBERS

Skypix basics
General info about Skypix

The Skypix protocol

are represented as character strings for ease of editing and to allow ANSI parsers to discard them. In this discussion I use "command" to refer to the entire sequence from escape character through the exclamation point.

Implementation notes

Obviously, the simplest way to implement this is to watch out for the exclamation point when parsing, then do a case-switch for the value of the first parameter. Do error checking at this point to make sure the command is receiving a sensible number of parameters; if not, discard the whole command. When additions to the protocol are made it is easy to insert them as more cases in your switch statement.

Some commands, for instance the font change and XMODEM transfer, expect the NEXT "command" to be an exclamation-point-terminated string. With fonts, this is the name of the font (WITH .font on the end), and with XMODEM it is the FILENAME. Due to the obvious possibility of abuse, a supplied pathname is NOT allowed in XMODEM transfers and should be discarded, and perhaps even a warning message displayed.

When a SkyPix command refers to a point on the screen, zero in the Y coordinate should mean the first pixel below any title bars, etc. SkyPix expects to have at least 24 lines available.

This definition is obviously for a SkyPix RECEIVER. A SkyPix TRANSMITTER works quite differently. Aside from the obvious changes in functions, a SkyPix TRANSMITTER totally ignores any SkyPix command returning to it except the CONTROLLER report.

SKYPIX COMMANDS & IMPLEMENTATION

1 - SET PIXEL

Syntax: <ESC>[1;x;y|

Sets the pixel at the specified X and Y coordinate to whatever color is in Pen A.

2 - DRAW LINE

Syntax: <ESC>[2;x;y|

Draws a line in the current A pen color from the existing pen position to the point XY.

Skypix implementation notes

Skypix definitions

The Skypix protocol

3 - AREA FILL

Syntax: <ESC>[3;m;x;yI

Floods, in mode m, the area beginning at XY.

4 - RECTANGLE FILL

Syntax: <ESC>[4;x1;y1;x2;y2I

Draws a filled rectangle in the current color. Numeric parameters are the top left X and Y coordinates followed by the lower right X and Y coordinates.

5 - ELLIPSE

Syntax: <ESC>[5;x,y,a,bI

DrawEllipse() with the supplied parameters in order.

6 - GRAB BRUSH

Syntax: <ESC>[6;x1;y1;x2;y2I

Stores a piece of the screen as a brush in memory. From there it will behave exactly like a brush that has been received remotely. X1 and Y1 define the starting point, x2 the width and y2 the height.

7 - BLIT

Syntax: <ESC>[7;a;b;c;d;e;f;g;hI

Where A through H are all the numeric parameters, in order, ready to plug into BlitBitmap(). They are:

- a - the upper-left X coordinate of the source bitmap
- b - the upper-left Y coordinate of the source bitmap

The above two will usually be zero. HOWEVER, you can use these to blit *parts* of a brush to the screen.

- c - the upper-left X coordinate of the destination (the screen X coordinate)
- d - the upper-left Y coordinate of the destination (the screen Y coordinate)

Skypix definitions

The Skypix protocol

- e - the horizontal (X)size of the piece being blitted
- f - the vertical (Y) size of the piece being blitted
- g - the minterm to be supplied to the blitter.
- h - the mask for the operation.

Explaining the function of these last two parameters is beyond the scope of this chapter. The most common values used, to blit the entire object, are 192 for the minterm and 255 for the mask. For more information look up BltBitMap().

Blits from whatever is in the brushbuffer; if nothing's there, abort the command. All the parameters are supplied so that frame animation and other special effects can be performed.

8 - MOVE PEN

Syntax: <ESC>[8;x;y]

Moves the drawing pen to XY (NOT the cursor).

9 - PLAY SAMPLE

Syntax: <ESC>[9;a;b;c;d]

Plays a simple sample. A is the "speed" of the sample, b is the starting point in bytes, c is the ending point in bytes, and d is the number of iterations. If no sample is in memory, abort the command. Parameters a through c are currently ignored.

10 - SET FONT

Syntax: <ESC>[10;y!fontname.font]

Y is the Y size for the font. If zero, this command is a font RESET and the command aborts after doing so. It does NOT look for the fontname in this case.

If Y is non-zero, the parser delivers the font name next as an ASCII string with the ".font" extension, terminated with an exclamation point. This name and Y are then used to open the required font. If a font is not available it would be nice to note it to the user in some unobtrusive way. In this case, the default font is used instead.

WHEN ANY NON-DEFAULT FONT IS IN USE, the cursor is turned OFF. All text is done in JAM1 mode when a non-default font is chosen. All text is in JAM2 otherwise, so that the ANSI background color is meaningful. Anything SkyPix finds in a SkyPix

Skypix definitions

The Skypix protocol

file that isn't interpreted as a command is assumed to be text and is put out to the screen in whatever font is active, from wherever the cursor happens to be. When in any non-default font, carriage returns should move the cursor to the beginning of the next line, and linefeeds are ignored.

SkyPix, and especially SKYLINE, expect to have access to all the standard WorkBench fonts. Others can (of course) be used, but this is discouraged in SKYLINE because your caller might not have the font you requested.

11 - NEW PALETTE

Syntax: <ESC>[11;c1;c2;c3;c4;...;c16I

Sixteen packed values ready to be put in a 16-element, 16-bit integer array and plugged into LoadRGB4().

12 - RESET PALETTE

Syntax: <ESC>[12I

Resets to the SkyPix standard palette, which (with the values shown in decimal) is:

00, 00, 00
01, 01, 15
13, 13, 13
15, 00, 00
00, 15, 01
03, 10, 15
15, 15, 02
12, 00, 14
00, 11, 06
00, 13, 13
00, 10, 15
00, 07, 12
00, 00, 15
07, 00, 15
12, 00, 14
12, 00, 08

13 - FILLED ELLIPSE

Syntax: <ESC>[13;x,y,a,bI

The Skypix protocol

Same as ELLIPSE, but then does an area fill in the current color.

14 - DELAY

Syntax: <ESC>[14;aI

A is a value in jiffies (60ths of a second) ready to plug into Delay().

15 - SET A PEN

Syntax: <ESC>[15;aI

Set the A Pen to color a.

16 - CRC XMODEM TRANSFER (multipurpose)

Syntax: <ESC>[16;m;a;bIfilenameI

M is the mode. 1 means an IFF brush is coming; it should go to RAM: to be decoded and put in your brush buffer. 2 is an IFF sound sample; this is NOT YET IMPLEMENTED. 3 is a FutureSound (tm) format sample, and is treated the same as 2. Once these files are unpacked and ready to use in your buffers, they should be deleted from RAM:. Mode 20 is a general-purpose XMODEM download that goes to the user's default directory. An immediate download of the following filename begins.

When an IFF brush is coming, A and B are the X and Y size. These are of course redundant, since they are also in the brush header - they are included here mainly to help humans visualize the brush when writing SkyPix code in a text editor.

This download is done in standard CRC XMODEM except that it should happen invisibly (no transfer window), and will abort after only ONE retry.

Brushes are now RETAINED in memory after use. If the named brush already exists, SkyPix terms should abort the transfer by sending 5 CANs (CANCELS), then decoding the brush into a bitmap as usual. This can be a big help in applications such as SkyPix menus with brushes. In this case, the brush need only be sent once per logon.

17 - SELECT DISPLAY MODE

Syntax: <ESC>[17;mI

Currently, M is either 1 or 2. 1 means return to a normal display (ignored if it is

Skypix definitions

The Skypix protocol

already a normal display), 2 means go to a 4-bitplane display (SkyPix ALWAYS uses a 640 X 200 screen). The palette should be reset any time a display mode changes. This will eventually be expanded to at least include dual-playfield mode. NOTE that at 9600 baud or higher it's OK with SkyPix to close all the way down to a 1 bitplane screen if needed for speed in the default screen, BUT when requested by SkyPix, the system should change displays as requested.

18 - SET B PEN

Syntax: <ESC>[18;bI

The B pen is set to color B. This is useful mainly in the default font, to allow the ANSI backgrounds access to more colors.

19 - POSITION CURSOR

Syntax: <ESC>[19;x;yI

Moves the text cursor to XY. Does NOT affect the position of the drawing pen.

20 - FORCELOAD MENUS (Not yet Implemented)

Syntax: <ESC>[20;almenuname1lmenuname2lmenuname3l...

Skypix terminals should allow one menu list named "Remote" to be controlled by the host. A is the number of menus coming, and each filename is then appended, each ending in an exclamation point.

21 - CONTROLLER RETURN

Syntax: <ESC>[21;c;x;yI

This is the ONLY SkyPix command that a terminal actually TRANSMITS back to the host. C is the controller type, according to this table:

1 = LEFT MOUSE-BUTTON CLICK. In this case X and Y are the current mouse X and Y coordinates. This should trigger ONLY on the DOWNWARD part of the mouse click; the intuition message announcing the RELEASE of the button must be filtered out.

2 = MENU SELECTION from the controlled menu. X ranges from ZERO for the first item up through highest menu number minus 1. Y is ignored.

The Skypix protocol

22 - DEFINE A SKYPIX GADGET

Syntax: <ESC>[22;n;c;x1;y1;x2;y2!

N is the SkyPix gadget, numbered 1-20, and C is the command NUMBER associated with it. X1 and Y1 are the top left corner of the hitbox; X2 and Y2 the lower right. The hitbox is automatically painted with whatever color is in APen. Notice that in a terminal implementation with no auto-answer mode that can use SkyPix, this can simply be interpreted as a DrawFilledRectangle command and N and C can be discarded.

The Arexx Interface

THE AREXX INTERFACE

AREXX is a powerful language that is very suitable for interprocess communication. This makes it ideal for use in a BBS system, and Skyline is the first and only BBS system to realize this and take advantage of it. The AREXX interface built into Skyline allows you to literally modify Skyline's operation to work any way you want it to. Most people will however be more interested in the fact that it makes writing online games a snap. Many are available and more are being written all the time.

To install an online game, simply put its main program file in the JMP: directory and list it in your TXT:Envir/JumpMenu file. Read the game's documentation to see if it requires any subdirectories or other files to be installed.

To write an AREXX program to interface with Skyline is very easy. Only a few requirements are needed:

Use "address 'skyline'" to get it hooked up to Skyline as a host.

Include the line "options results". Skyline returns strings to your program in the global variable RESULT.

If your program is synchronous, that is, if you are running it from SkyDoors or the @Y1 command, make sure the exits execute the command SHUTDOWN. Always use EXIT to actually end your program.

NOTE: SkyDoors programs MUST reside in JMP:, just as before, *NOT* REXX:. These programs should use ONE subdirectory, contained within JMP:, for any auxiliary files.

Skyline includes a variety of host commands to make online interaction a snap. In many cases changing an AREXX program to work in Skyline is as simple as changing the input and output commands. Here are the commands currently available:

The AREXX Interface

COMMANDS SUPPORTED SO FAR:

SCREENOUT string	Send a string to the screen only; EOL added
TRANSMIT string	Send a string to the screen and modem (IF carrier is present; if not, screen only); EOL added.
SENDSTRING string	Same as TRANSMIT but adds no EOL character.
RECEIVE	Get a string
GETCHAR	Get a single-character invisible "hotkey" input
GETCARRIER	Get the state of the carrier - returns string "TRUE" or "FALSE"
DROPCARRIER	Drop carrier (ONLY) - for callback systems etc. Remembers caller's baud rate and other RS232 settings.
BUFFERFLUSH	Discards contents of the RS232 buffer, if any.
QUERY	Send a string and get a string response, all on same line; much like INPUT in BASIC
ADDTIME string	Add a number of minutes to time limit THIS call
SENDFILE path	Send a file - *WITH* all Skyline's file processing, embedded cmds etc. Note that this means you can hang FULL menu trees INSIDE your Elsewhere program, and do all the embedded command tricks. Also see SKYPARSE. You must include a full pathname.
SHUTDOWN	Final message sent by an Elsewhere program upon exit and upon exit from a synchronous embedded AREXX command). Cues Skyline to take over again - note that the AREXX macro need not actually terminate if you don't want it to.
SENDMODEM string	Send a string to the modem only. Always use this instruction when talking to the modem for commands, since if there's no carrier, TRANSMIT will only put it on the screen.

The AREXX Interface

RESETMODEM	Reset the modem according to settings in defaults file, exactly as if the board was resetting for a new caller. FORGETS previous state of RS232 parameters.
VERSION	Return the Skyline version number.
BBSCOMMAND string	Executes any BBS command by number. This is delimited by user flags and the limitations of the last menu. Note that you do not have to have examined the user's flags; SKYLINE knows what they are.
XUP path	Immediately starts an XMODEM transmission. Returns TRUE if successful, FALSE if not.
XDN path	Immediately starts an XMODEM reception. Returns TRUE if successful, FALSE if not.
BBSMODE number	If NUMBER is 1, sets SKYLINE to BBS mode; anything else turns BBS mode off.
SPAWN	Asynchronously issue an AREXX command, start macro, etc.
LOGENTRY	Puts a one-line entry in your LOG file.
SKYPARSE	Sends a string through the embedded command parser. Use only when needed; it has more overhead than TRANSMIT.
BAUD	Changes baud when OFFLINE.
GETUSER	Returns a value depending on the argument, from 0 to 32 as follows:
0	Real address of the actual caller's User Structure
1	Name
2	Password
3	High-Security Password
4	City
5	State
6	Street
7	Extra 1

AREXX host commands

The AREXX Interface

- 8 Extra 2
- 9 Extra 3
- 10 Phone
- 11 Date of last call (in Ascii)
- 12 Sysop's comment
- 13 Main menu number
- 14 (Reserved)
- 15 Flags (see below)
- 16 Access level
- 17 (Reserved)
- 18 Number of minutes today
- 19 Clear screen code
- 20 Default SIG
- 21 Default database
- 22 Total calls to system
- 23 (Reserved)
- 24 Protocol
- 25 Last day (days since Amiga's "Beginning of Time")
- 26 Total uploads
- 27 Total downloads
- 28 Time limit per call
- 29 Daily time limit
- 30 Download ratio
- 31 Lines per page
- 32 (Reserved)

NOTE: The commands RECEIVE, QUERY and GETCHAR check for carrier loss and timeout when executed from BBS mode. If the user times out or drops carrier, these commands will return the string '###PANIC'. You can use this feature to make sure noone gets hung up in Elsewhere.

We also recommend putting the command "Signal on syntax" at the beginning of your program, then creating a subroutine called 'syntax' that displays an error message to the user, then does a SHUTDOWN and an EXIT. This assures that if there are any unexpected bugs in your program they will be "trapped" and the board won't lock up.

The Arexx Macro embedded command is @Yn COMMAND, on a line of its own or separated with a space after COMMAND. The n is the mode number: 0 is for asynchronous, 1 for synchronous. Mode 0 starts the AREXX macro and returns immediately; mode 1 starts it and waits for it to terminate with the SHUTDOWN command, like Elsewhere does.

The AREXX Interface

The User structure is as follows:

```
struct User {  
  short  MagicNumber1;  
  ULONG  MagicNumber2;  
  char   UserName[20];  
  char   UserPassword[10];  
  char   UserPass2[5];  
  char   UserCity[20];  
  char   UserState[3];  
  char   UserStreet[40];  
  char   UserExtra1[40];  
  char   UserExtra2[40];  
  char   UserExtra3[40];  
  char   UserPhone[11];  
  char   UserLastCall[32];  
  char   UserSysopComment[30];  
  UBYTE  UserMenu;  
  UBYTE  Reserved1;  
  UBYTE  ExtraSpace[8];  
  ULONG  UserBools;  
  UBYTE  UserAccess;  
  UBYTE  UserTerm;  
  UBYTE  UserMinsLogged;  
  UBYTE  UserCLS;  
  int    UserHighs[20];  
  short  UserConf;  
  UBYTE  UserDbase;  
  short  UserTotalCalls;  
  short  Reserved2;  
  short  UserProtocol;  
  short  UserLastDay;  
  short  UserUploads;  
  short  UserDownloads;  
  short  UserTimeLimit;  
  short  UserDayLimit;  
  ULONG  UserFirstMail;  
  short  UserRatio;  
  short  UserLines;  
  ULONG  Reserved3;  
  int    UserConfs[20];  
};
```

The User structure

The AREXX Interface

If you don't understand EXACTLY what these fields do PLEASE DON'T MESS WITH THEM!!!! You can permanently alter a user's record by finding out where it is (using GETUSER 0) and doing an offset for the field you want... but for heaven's sake be carefull DON'T use the Reserved, MagicNumber and ExtraSpace areas; they're reserved for future features. If you need variable space use the SysopComment or the UserExtra areas.

In general, be extremely cautious with all this power. You can really make a mess of things if you aren't careful.

Flag fields: To see if a flag is set, do a bitwise AND between the number returned for the Flags variable and the following bit values:

ONLY	1
ULOG	2
TEXT	8
SEND	16
PRVT	32
ELSE	64
CHAT	256
UPLD	512
DNLD	1024
XPRT	4096
LNFD	8192
READ	16384
GATE	32768
MOVE	65536
ANSI	131072
SKYP	262144
SGOP	524288

LAST-SECOND NOTE: As this manual went to press the capability to run up to ten AREXX programs directly from a menu was added. This is not yet in the menu compiler; you have to add it yourself. It's done with the embedded command @MX[Number][Path], where NUMBER is a number from 0 to 9 and PATH is the full path to the command (don't insert spaces). Put this in the menu header with a text editor, somewhere before the @MZ command. Extend the top line of dashes and letters by 12 more dashes, then for the next 10 characters, either place another dash or the letter you are choosing to activate that command number. For Skypix gadgets, the command numbers will be 61 through 70.

User flags - bit values

Index

AREXX			
Host commands	78	ENTR flag	25
Introduction	77	Environment files	45
Using from menus	82	Flag field values	82
Assignments	12	Function keys	58
Auto upkeep	63	Help files	47
Batch files	63	Iconify	64
Baud rates	65	Installation	12
BBS command set	41	Interact window	59
Black holes	33	illus.	60
CHAT flag	25	Intuition menus	64
Chat mode	58	JMP:	14
Coldstarting	14	LF flag	25
Colors	65	Master	17
Command parser	56	Menu compiler	36
Command stacking	56	illus.	38
Compiled menus	9, 10	Menu control commands	52
Configure options	23	Menu trees	
Configure window	19, 63	capabilities	9, 33
Converting		circ. references	32
from 1.0	17	constructing	36
from 1.1	19	examples	35
from other systems	19	explained	31
Copy protection	7	illus.	37
DB:	13	Message bases	
DBS flag	25	access only	27
Display mode	64	configuring	26
DNLD flag	25	detail win. (illus.)	29
Download ratios	24	EMAIL	27
ELSE flag	25	high security	28
Embedded commands	47	locked	28
example	54		

Message bases (cont'd)	
max # of msgs	27
read only	27
renaming	28
retain undelivered	27
upkeep	27
Message editor	56
Message format	57
Modems	20
MSG:	13, 25
New features	8
NewMember	
access	24
flags	25
limits	25
NonMember	
access	24
flags	25
limits	24
Penrose diagrams	32
Privilege flags	60
PRVT flag	25
Quiet mode	64
Ranges	40
Requirements	7
Registration	8
Screen clearing	58
SkyBatch file	63
SkyDaily file	63
Skypix	
codes	69
gadgets	35
implementation	70
tips	80
Stack	17
Startup sequence	5
Support	8

Terminal	
protocols	65
Text libraries	29
TBS flag	25
TMP:	13
TXT:	13
UPLD flag	25
User structure	81
XPT flag	25



"...The future of telecommunications
on the Amiga..."

Amigo Times Magazine

The SKYLINE BBS SYSTEM may be the most revolutionary BBS system in the world.

Compiled menus created with the Menu Compiler (included) make designing even very large systems a snap. The Skypix graphics protocol, invented specifically for the Amiga, creates stunning graphics never before possible on a BBS system. Novice users will enjoy the point-and-click Skypix gadgets as an easy and novel way to navigate their way around the system.

And in this new version, the AREXX programming language (not included) is fully supported, making possible write-your-own online games and applications and complete customization of the system.

You and your users will agree with hundreds of owners around the world... there has never been a system like Skyline.

(Former versions sold as the ATREDES BBS SYSTEM)

Distributed by:
CVI TELEPRODUCTIONS
P.O Box 13417
El Paso, TX 79913